

Proceedings of the 5th Annual Federal Depository Library Conference



April 15 - 18, 1996

Library Programs Service
U.S. Government Printing Office
Washington, DC 20401

**U.S. Government Printing Office
Michael F. DiMario, Public Printer**



**Superintendent of Documents
Wayne P. Kelley**

**Library Programs Service
James D. Young, Director**

**Depository Services Staff
Sheila M. McGarr, Chief**

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Arlington, VA

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1996

Marian W. MacGilvray
Editor

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Agenda

Spring 1996 Depository Library Council Meeting & Federal Depository Conference:

April 15 - 18, 1996
Washington National Airport Hilton
2399 Jefferson Davis Highway
Arlington, Virginia

Sunday, April 14

- 4:00-5:00 New Documents Librarians
Orientation to Council and Conference
- 6:00 Informal pre-dinner get-together to network by food preference

Monday, April 15

- 8:00 Registration and Coffee
- 8:30 Welcome & Introductions - Plenary session
- 8:45 Welcome & Government Information Initiatives Update
 - Michael F. DiMario, Public Printer
- 9:15 GPO Update
 - Wayne Kelley, Superintendent of Documents
 - J.D. Young, Director, Library Programs Service (LPS)
LPS Staff
 - Judith Russell, Director, Office of Electronic Information Dissemination Services (EIDS)
- 10:30 GPO Update (continued)
- 12:00 Working Lunch
In order to foster networking, librarians are requested to lunch with other librarians from similar types of institutions.
- 2:00-5:00 Depository Library Council
Committee Reports and Recommendations for Council Action
- 2:00-5:00 New Documents Librarians
Informal session to answer questions from mundane to complex about depository issues. For new documents librarians or those who feel "new" to any aspect of

depository librarianship. Veteran documents librarians from a variety of backgrounds plus GPO staff will be available.

- 2:00-3:00 Overview of Compact Disc Standards, Including CD-ROM, CD Write Once, and Photo CD
- William Reilly, Technical Writer/Editor, Graphic Systems Development Division, GPO
- 2:00-3:00 GPO Access Demonstration: Federal Register
- Terri Barnes, Management Analyst, Office of Electronic Information Dissemination Services, GPO
 - Vicki Ries, Management Analyst, Office of Electronic Information Dissemination Services, GPO
- 2:00-3:00 LPS Tour
- 2:00-3:00 Patent Public Search Room Tour
- 3:00-4:00 Preservation and Archival Issues for Electronic Records
- Theodore Hull, Archives Specialist, Center for Electronic Records, NARA
 - Fynnette Eaton, Chief, Technical Services Branch, Center for Electronic Records, NARA
- 3:00-4:00 GPO Access Demonstration: Congressional Products
- Terri Barnes, Management Analyst, Office of Electronic Information Dissemination Services, GPO
 - Vicki Ries, Management Analyst, Office of Electronic Information Dissemination Services, GPO
- 3:30-4:30 Trademark Public Search Room Tour
- 4:00-5:00 Access to and Services for Federal Information in the Networked Environment
- Joan Cheverie, Visiting Program Officer, Coalition for Networked Information
- 4:00-5:00 GPO Access Demonstration: Other Web Applications, GILS, Monthly Catalog, BBS, etc.
- Terri Barnes, Management Analyst, Office of Electronic Information Dissemination Services, GPO
 - Vicki Ries, Management Analyst, Office of Electronic Information Dissemination Services, GPO
- 5:30 Dinner with Council (Informal groups meet in hotel lobby)

Tuesday, April 16

- 8:00 Coffee with Council & GPO
- 8:30 Depository Library Council/Conference - Plenary Session
Taking the Next Step: Preparing Libraries for a More
Electronic Federal Depository Library Program
Focused Discussion Sessions:
Issue 1 - Bibliographic Access in an Electronic Environment
- 10:30 Depository Library Council/Conference
Issue 2 - Long-Term Retention and Access to Electronic Information
- 12:00 Working Lunch
In order to foster networking, librarians are requested to lunch with other
librarians from similar sized institutions
- 2:00-3:00 Scientific and Technical Information Center Tour
- 2:00-5:00 Depository Library Council Working Session
- 2:00-3:00 Knowing Your Local Community: Using Federal Information to Learn About
Community Change
- Vicky York, Associate Professor, Montana State University-Bozeman Libraries
 - Jerry Johnson, Ph.D., Associate Professor, Dept. of Political Science, Montana
State University-Bozeman
- 2:00-3:00 GPO Access Demonstration: Federal Register
- Terri Barnes, Management Analyst, Office of Electronic Information
Dissemination Services, GPO
 - Vicki Ries, Management Analyst, Office of Electronic Information
Dissemination Services, GPO
- 2:00-3:00 Using Older U.S. Documents for Historical Research: Serial Set and Congressional
Record
- Judith M. Feller, Documents Librarian, East Stroudsburg University
- 2:00-3:00 LPS Information Exchange (Drop-in)
- 3:00-4:00 Internet as a Shared Community/Library Experience in Michigan
- Carolyn Gaswick, Documents Librarian, Albion College
 - Carolyn Price, Documents Librarian, Flint Public Library
- 3:00-4:00 GPO Access Demonstration: Congressional Products
- Terri Barnes, Management Analyst, Office of Electronic Information
Dissemination Services, GPO
 - Vicki Ries, Management Analyst, Office of Electronic Information
Dissemination Services, GPO

- 3:00-4:00 FinanceNet and U.S. Business Advisor
- Glynis Long, Americans Communicating Electronically
- 3:00-4:00 Defense Information at Your Fingertips
- Holly Wilson, Librarian, Defense Technical Information Center
- 4:00-5:00 Web Sites for Patrons Seeking Government Information
- Doreen L. Hansen, Depository Office Manager, University of Minnesota, Duluth
 - James Vileta, Government Documents Librarian, University of Minnesota, Duluth
- 4:00-5:00 GPO Access Demonstration: Other Web Applications, GILS, Monthly Catalog, BBS, etc.
- Terri Barnes, Management Analyst, Office of Electronic Information Dissemination Services, GPO
 - Vicki Ries, Management Analyst, Office of Electronic Information Dissemination Services, GPO
- 4:00-5:00 ERIC in the Electronic Age
- Lawrence M. Rudner, Ph.D., Executive Director, ERIC Clearinghouse on Assessment and Evaluation
 - Tamara Westover, Outreach Coordinator
- 4:00-5:00 Federal Statistical Policy
- Edward J. Spar, Executive Director, Council of Professional Associations on Federal Statistics
 - Stephen Dienstfrey, Vice-President, Association of Public Data Users
 - Thomas Brown, Past President, International Association for Social Science Information Service and Technology
- 7:30-9:00 ALA/GODORT Program: Talking to Congress: What Works

Wednesday, April 17

- 8:00 Coffee with Council & GPO
- 8:30-12:00 Depository Library Council Working Session
Draft Recommendations and Action Items
- 8:30-10:00 Handout Exchange (Drop-in)
- Facilitator: Larry Romans, Head, Government Information Department, Vanderbilt University
 - GPO Promotion and Advertising Branch
- 8:30-9:30 Working Toward a Virtual Library
- Laurie E. Stackpole, Chief Librarian, Naval Research Library
- 8:30-9:30 Pathway Services Demonstration
- Raeann Dossett, Internet Specialist, GPO

8:30-10:00 REIS CD-ROM Training Session

8:30-10:00 Regional Program

Welcome and Introductions

The World Wide Web: Four Perspectives on Its Use

- Kenneth Mortensen, Director of Operations, Villanova Center for Information Law and Policy
- Anna Sylvan, GIS/Documents Librarian, St. Charles City-County Library District
- Larry Schankman, Documents Coordinator, Mansfield University
- Maggie Parhamovich Farrell, Internet Specialist, GPO

10:00-12:00 Federal Publishers Committee

An opportunity to meet representatives from Federal agency publishers to find out about their latest techniques/practices in electronic information dissemination

- Moderator: Nancy Nicoletti, Chief, Publication Services, Energy Information Administration, U.S. Dept. of Energy
- Mark Rodekohr, Director, Energy Markets & Contingency Information Division, U.S. Dept. of Energy
- Mary McMichael, Supervisory Economist, Bureau of Labor Statistics
- David Govoni, NMD Internet Services Coordinator, U.S. Geological Survey
- June Gable, Chief, Information Services Section, National Center for Health Statistics

10:00-11:00 LPS Tour

10:00-11:00 Patent Public Search Room Tour

10:30-11:30 Pathway Services Demonstration

- Raeann Dossett, Internet Specialist, GPO

10:30-12:00 Regional Program

Automated Check-in of Documents at Regional Depositories:

OPAC and Innovative Interfaces

- Jerry Frobom, Federal Documents Librarian, University of Nebraska-Lincoln
- PC-based USDOCS and Bernan
- Lily Wai, Head, Government Documents, University of Idaho
- USDOCS and Marcive
- Elizabeth Baur, Documents Librarian, University of Memphis

10:30-12:00 REIS CD-ROM Training Session

10:30-12:00 LPS Information Exchange (Drop-in)

- LPS staff and contractors

12:00 Working Lunch

In order to foster networking, librarians are requested to lunch with other librarians from the same geographic region

1:30-3:00 REIS CD-ROM Training Session

2:00-5:00 Depository Library Council Working Session

2:00-3:00 Regional Program

Working Groups, Committees, Associations, Task Forces, Coalitions: What Have We Been Doing for the Past Few Years?

- Julia Wallace, Head, Government Publications Library, University of Minnesota
- How Ready Are We To Become Electronic Depository Libraries?
- Lily Wai, Head, Government Documents, University of Idaho Library

2:00-3:00 GPO Access Demonstration: Federal Register

- Terri Barnes, Management Analyst, Office of Electronic Information Dissemination Services, GPO
- Vicki Ries, Management Analyst, Office of Electronic Information Dissemination Services, GPO

2:00-3:00 Facilities Planning for the Electronic Age

- Robert Hinton, Documents Librarian, Indiana University-Purdue University at Indianapolis

2:00-4:00 WAIS, Lynx, WWW, and S-WAIS Gateways: Origins and Evolution

- Bert Chapman, Government Publications Coordinator, Purdue University Libraries
- George Barnum, Head of Government Documents, Case Western Reserve University
- Walter Newsome, Documents Coordinator, University of Virginia
- Suzanne Holcombe, Assistant Documents Librarian, Oklahoma State University
- Ellen Dodsworth, Documents Librarian, Georgetown University
- Debora Cheney, Head, Documents/Maps Section, The University Libraries, Pennsylvania State University

2:00-3:00 LPS Tour

2:00-3:00 Scientific and Technical Information Center Tour

3:00-5:00 Regional Program

Open Discussion: Transition to an Electronic Federal Depository Library Program

- Facilitator: Cassandra Hartnett, Documents Coordinator, Detroit Public Library

3:00-4:00 GPO Access Demonstration: Congressional Products

- Terri Barnes, Management Analyst, Office of Electronic Information Dissemination Services, GPO
- Vicki Ries, Management Analyst, Office of Electronic Information Dissemination Services, GPO

3:00-4:00 Regional Input-Output Modeling System Multipliers and Regional Economic Projections and Gross State Product Data

- Eric Repice, Regional Economist, Regional Economic Analysis Division, Bureau of Economic Analysis, Department of Commerce
- George Downey, Chief, GSP & Projections Branch, Bureau of Economic Analysis, Department of Commerce

- Donna Desrochers, Regional Economist, GSP & Projections Branch, Bureau of Economic Analysis, Department of Commerce

3:30-4:30 Trademark Public Search Room Tour

4:00-5:00 NOAA Electronic Products and Services

- Anna Fiolek, Documents Coordinator, NOAA Central Library
- Doria Grimes, Chief, Contract Operations, NOAA Central Library
- Dottie Anderson, Reference Librarian, NOAA Central Library

4:00-5:00 GPO Access Demonstration: Other Web Applications, GILS, Monthly Catalog, BBS, etc.

- Terri Barnes, Management Analyst, Office of Electronic Information Dissemination Services, GPO
- Vicki Ries, Management Analyst, Office of Electronic Information Dissemination Services, GPO

4:00-5:00 GPO Pathway Services Focus Group

- Raeann Dossett, Internet Specialist, GPO
- Maggie Parhamovich Farrell, Internet Specialist, GPO

Thursday, April 18

8:00 Coffee with Council & GPO

8:30 Depository Library Council/Conference - Plenary Session

Report of Draft Recommendations and Action Items (including audience response and comments)

10:00 Conclusion of Council Meeting

10:45 What's Driving Federal Information Policy

- Patrice McDermott, Information Policy Analyst, OMB Watch

11:15 Roles for Libraries and Librarians Within the NII

- Fred W. Weingarten, Senior Policy Fellow, American Library Association, Washington Office

12:00 Conference Adjourns

1996 Federal Depository Conference



**U.S. Government Information...
ELECTRONICALLY**

GPO Update

J.D. Young
U.S. Government Printing Office
Washington, DC

Good morning everyone. It's my pleasure also to welcome you to the Spring 1996 meeting of the Depository Library Council and the biggest and, I'm sure, the best yet Federal Depository Conference. We regret the crowding, but the turnout for this meeting is totally unprecedented. Attendance is up about 50% from last year, and although we thought this year would be unique, we never expected that kind of jump.

First, I want to thank the many people, both in and outside of GPO, especially our own LPS staff, who contributed to the study of our Depository Program. I want to commend Judy Russell for the amazing job she did in pulling the whole thing together and Wendy Frederick and Ric Davis for the hours of work they put in finishing the writing and editing of the study report. I also want to thank the participants in Study Task 6, which was an "evaluation of current laws governing the FDLP and recommendation of any legislative changes necessary for a successful transition to a more electronic program." I think that many of the issues identified in the larger Study working group came together in the "legislative change task" and I recommend you look carefully at that section of the draft Study Report.

It seems that all we have been doing for the past several months in the Library Programs Service has had to do with the future; working on the study, preparing budget materials, and drafting plans. In this regard, I want to commend Gil Baldwin, our Library Division Chief, who has led these efforts. I also want to commend all of our LPS managers who

have kept the traditional services going while at the same time being heavily involved in the study and planning activities.

Speaking of traditional services, I do have one piece of news that I think you will like in one respect, but probably is not good news for our overall program. Based on our output of titles distributed in the first half of this year, it appears that, for the first time in many years, the number of titles distributed in microfiche will be less than those distributed in paper. Where the ratio has been 60% fiche to 40% paper, it may be the reverse of that this year. As best as we can tell, this is the result of two things: 1) a downturn in the kinds of titles that would have been subject to conversion to fiche coming through GPO for printing, and, 2) we are receiving fewer single copies from agencies that we would have converted and distributed in fiche. The number of paper titles is about the same as the past two years, so that type of material is holding in better. Certainly, some of the fiche type material is now only being published via agency Internet sites or what we are now referring to as "Government electronic information services."

Transition Tasks in LPS

And that brings me back to the electronic environment. Judy has discussed the results of the study. Now what I would like to do this morning is share with you some of our thoughts on how GPO and the Library Programs Service will approach the movement toward a more electronic program. We have had our Appropriations hearing in the House where the feeling still seems to be for a rapid

transition. However, the thoughtful expressions of concern from the many stakeholders in Government information led to the five-year strategic plan which was included in the study. Our Senate appropriations hearing is scheduled for mid-May.

At Library Programs Service, we will implement our plans through a project type approach, and we are now in the process of assigning responsibilities for specific projects and identifying tasks. We are approaching this on a project basis because it is coming on top of our regular work which must continue as well. Conceptually, we will break the implementation into four major projects.

- 1) The first project is the obvious one of acquiring electronic information products for the FDLP. This will include tangible products such as CD-ROMS, acquiring information for online dissemination via GPO Access, and the identification of information products falling within the scope of our program at other agency sites. As an extension of the traditional acquisitions work we do, Robin Haun-Mohamed and the Depository Administration Branch will be responsible for this project.
- 2) The second project will address cataloging and locator services. As you know, most agencies, excluding the sci/tech ones, have not cataloged their own publications. This has been a centralized service performed by the Superintendent of Documents. I have concerns that, in the electronic environment, agencies will not do any more than before to provide for real, persistent, bibliographic control. So, I believe that bibliographic control, at what has been the individual publication level, is a centralized service that the Superintendent of Documents should continue to perform, or at least fully coordinate. This major project, which will encompass a range of activities from traditional cataloging to the emerging suite of Pathway services, will be the

responsibility of Tad Downing and the Cataloging Branch, with the help of our Electronic Transition Staff.

- 3) Transition-related activities which strengthen the depository library system through training, continuing education, and the revised inspection program, comprise the third project, which will be the responsibility of Sheila McGarr and the Depository Services Staff.
- 4) The fourth project is to establish a system for providing permanent retention and access to FDLP information. This is a role that our program has played through our Regional library system, and one that the Superintendent of Documents, in my opinion, must continue. Ric Davis and the Electronic Transition Staff, in addition to assisting with all of the transition projects and launching several on their own, have responsibility for this key project and for coordinating this issue with other stakeholders.

That's the project breakdown; now I'd like to focus on each of these four areas.

I. ELECTRONIC CONTENT FOR THE FDLP

Online Electronic Products in the FDLP

First, for the acquisitions project, the current definition of "government publication" in Section 1902 of Title 44, U.S.C. needs to be broadened to include, without question, electronic information, whether published as a tangible product or made accessible via an electronic online service. During the Legislative Task 6 discussions for the study, we arrived at some new definitions. Let me run through them quickly. They are included in the study report as Attachment F and in the Strategic Plan which is Exhibit 1.

"Government information" means Government publications, or other Government information products, regardless of form or format, created or compiled by employees of a Government

agency, or at Government expense, or as required by law.

A "Government information product" means a discrete set of Government information, either conveyed in a tangible physical format including electronic media, or made publicly accessible via a Government electronic information service.

A "Government electronic information service" means the system or method by which an agency or its authorized agent provides public access to Government information products via a telecommunications network. The telecommunications network today is, of course, the Internet.

As you know, a common usage to describe things on the Internet has been "information products and services." We tried to deal with this in the December budget transition plan, when we defined products as tangible, and services as intangible or online information. But, for our application, this still did not work well. According to the dictionary, service is a "system or method of providing people with the use of something," therefore it is not the "something" itself. So, in our application, the "something," as we see it, is the information product or the content, and it is provided on an electronic information service. One other note, OMB has used "information dissemination products and services." We must be very aware of use of the word "dissemination" in this manner, however, because it can be construed to mean only those information products that are actually created for public dissemination. We all know how limiting that would be, since most Government information products are originated for internal use and then have external value as well.

Handling Online Electronic Products

Even as we speak, electronic government information products are being incorporated into our program. I want to bring to your attention that the draft Study report, Appendix

E to the Strategic Plan, the very last pages in the report, has a set of diagrams showing how we intend to handle the various agency publishing alternatives.

Some of the products coming into the program exist only as online files accessible from a Government electronic information service, and others may be related to print editions of the same information content. We are developing a consolidated approach to presenting and identifying online electronic products. We think this approach makes sense in the electronic environment, but it does not necessarily carry forward all of the familiar (and resource intensive) elements of the paper-based model.

The "Custody" Issue

The changeable nature of many online electronic products in terms of permanence or location has led us to concentrate initially on those electronic titles over which the Superintendent of Documents (SOD) has custody or control. This distinction has very real resource implications for LPS. The distributed information management environment of the Internet does not lend itself to a centralized holdings model. Instead, the originating agency, or the agency which has custody of the data, is best positioned to assume responsibility for it.

Presentation on GPO Access

Preparing for the 21st Century: An Appraisal of U.S. Intelligence was the first document to be made available through the program exclusively in an online format. It first appeared on the GPO home page with a NEW highlight. We have now developed a specific Web page entitled "Government Information Products Available on the Internet From GPO" with the products arranged by Government agency and alphabetically by title under each agency. This page can now be reached from the Pathway services page on GPO Access, but we will be relocating it for quicker accessibility.

Classification

A Superintendent of Documents classification number was established for Preparing for the 21st Century in order to allow the title to be processed for the various Monthly Catalog outputs, including presentation on the GPO Web site. However, this classification number may not be the model used for future electronic products.

Librarians from the depository community and LPS have joined together to review the application of the SuDocs classification system to online products. At the ALA meeting in San Antonio, concern was expressed over the announcement that LPS would not be applying the SuDocs classification system to online resources. There was also a misunderstanding of our intent concerning the application of the SuDocs system to physical products. That effort will be continued.

In response to this concern, LPS formed an ad hoc committee to consider these issues. The group is reviewing one proposal to keep some of the elements of the existing SuDocs class structure and adding a system generated number after it. It is assumed that one of the reasons for wanting to keep the SuDocs number is its usefulness in identifying information about the agency responsible for the product. The proposal being reviewed would allow this type of information to be retained, but would also allow staff to process the products more quickly.

As you know, the location requirements of intangible or online electronic data are not met by the SuDocs system. For electronic information products stored in a digital data repository, permanency and uniqueness can be ensured by applying the "persistent name," or URI, Uniform Resource Identifier; or "handle." When a standard for "persistent names" emerges, we will utilize or adapt the approach to identify the electronic information products under our custody. In the near term, the modified classification number I just spoke of may be assigned to electronic titles for control purposes until the "persistent name"

approach matures. If you have ideas on this process, please contact Robin Haun-Mohamed, or of course, share them with the Council.

Notifying Depository Libraries

We do not intend to issue an "Electronic Products" Shipping List for resources found only online on the GPO Access Services. Although we have included information about Preparing for the 21st Century in the latest Administrative Notes Technical Supplement in the E-Report column, this method is only an interim solution. We will use the "New and Hot" section of the new page on our Web site to notify you of online electronic products available from GPO Access.

Selection

Online electronic titles will not be assigned an item number. When an online electronic product is available from GPO Access, all depository libraries have access to it and the limitations of the item selection do not apply in this context.

Document Conversion Efforts

Our Electronic Transition Staff (ETS) has been exploring the feasibility and cost-effectiveness of various approaches to expanding the range of electronic content in the FDLP. ETS and members of GPO's Production Services staff conducted an in-depth investigation of the feasibility and costs of scanning and conversion requirements for FDLP titles. Our goal in scanning was to create searchable, full text documents rather than just scanned images. We conducted conversion tests on a number of documents using commercially available off-the-shelf software.

Our tests produced mixed results. While large-scale document conversion proved to be possible, it was also found to be in many cases, very expensive. Current document conversion and scanning technology offers the possibility of creating either non-searchable image or full-text searchable electronic files.

However, documents we tested that were "text-intensive" had high character recognition error rates that would have necessitated a time-consuming and expensive proofing process prior to dissemination. So far, it appears that large-scale scanning of "text-intensive" publications is not a very viable option.

Our Next Steps

While recognizing the limitations of the current technology, our test results suggested that there is still a limited use for this process. A selective number of paper documents that are approximately 30 pages or less, and are "graphics-intensive," may be converted to image-only files and made available via GPO Access. These types of publications are excellent candidates for image-only document conversion.

We have also experienced success with some products that have been made available via GPO Access as ASCII and PDF files. However, these have not required conversion, but were products received by GPO from Federal agencies as original, electronic source files that are not only authoritative, but do not require significant proofing or have expensive "clean-up" costs associated with their data.

Source Data Files

As nearly all Government information products exist in electronic form at some point in their life cycle, the most cost-effective method of incorporating additional electronic information products into the FDLP is to obtain that source data from the originating agency. We will be pursuing different approaches to this end, including reaching out to publishing agencies to provide us with their files, and obtaining electronic data files from printing contractors.

II. CATALOGING AND LOCATOR SERVICES

Our second project is to develop cataloging and locator services, which will include the Pathway services.

We intend to provide full AACR2, MARC format cataloging for Government information products which come under our custody, whether in a physical format or an electronic file in a SOD facility. Our Locator services, including Pathway services and GILS records, will index and point users to the content of other Government information products on the Internet.

Links Project

Council recommended that LPS link MOCAT records that represent titles published in differing physical forms and/or in remotely accessible locations. This is a good recommendation, which we will pursue. The Cataloging Branch has done a considerable amount of homework investigating the potential use of linking entry fields. We consulted with CONSER and cataloging policy experts at the Library of Congress, in order to understand what is truly involved with such a venture, and to define the universe of potential linkages and the related complications.

We are considering a variety of options concerning how best to approach identifying electronic products on the Internet within the constraints of staffing and other resources. Within MOCAT, we will include the URL for those electronic titles which are available on GPO Access. Initially, the URL will not be hot linked but we intend to make them live links.

Another alternative we are investigating is Pathway Bibliographic Records. The concept is to identify selected full text electronic titles at agency Internet sites with abbreviated records consisting of six or seven data elements. The records will be hot linked so that users can proceed from the Pathway record to the electronic text at the agency site.

Pathway Services

Other Pathway tasks are moving forward through the efforts of Maggie Parhamovich Farrell, Raeann Dossett, and Joe Paskoski. They have taken steps to facilitate searching on the Internet through the Pathway Indexer, which will locate specific files by keywords. A prototype Pathway Indexer is operational on the GPO Web site. The Pathway Indexer functions like many other Internet indexers such as Yahoo!, except the Pathway Indexer is limited to only Federal Government Internet sites. We are currently using Harvest software and hope to upgrade the Pathway Indexer to more sophisticated search software in the near future.

The second application is our Pathway browse capability. Instead of looking for specific information with the Pathway Indexer, users can browse through subjects and titles for their information. We are using the subject topics from the Subject Bibliographies for this purpose and analyzing Internet sites by subjects. Government Internet sites are then listed under the appropriate topic. Users can browse through the topic list and select a topic which interests them. The browse application is also used for the new "Government Information Products" list which I mentioned earlier.

And finally, the Pathway GILS records created by LPS are integrated with the GPO GILS database. The Pathway GILS records are customized records in the GILS format which describe agencies at the highest level and point to agency Web sites and GILS holdings as well as to depository libraries.

For more information regarding Pathway services, please attend one of the demonstrations on Wednesday at 8:30 and 10:30. Also, Raeann, Maggie, and Joe will be conducting a focus group on Wednesday at 4:00 to solicit feedback regarding Pathway services.

Status of GPO Cataloging Products

Concerning current cataloging products, more than 38,000 Monthly Catalog records are now available at our Web site. These records begin with January 1994, and the most recent are those created two work days ago. Using the "locate" function, users are able to identify depository libraries that have selected titles represented by item numbers in these records.

The abbreviated paper edition of the Monthly Catalog is being distributed. To date, the January, February, and March 1996 issues have been published. The size and complexity of the paper catalog has been greatly reduced, which will allow us to save a significant portion of the more than \$500,000 that had been spent per year on the full paper edition. In May we expect to distribute the 1995 Cumulative Index to the Monthly Catalog, which will be the last of the old format paper products. We regret the confusion created by our inadvertently sending copies of the paper edition to libraries that had not selected it. If you did not select the paper edition but received a copy, treat it as you would an unselected title. If you selected the CD-ROM edition, be assured that we will honor your selection.

We had hoped to publish the CD-ROM edition of the Monthly Catalog at the same time as the abbreviated paper edition. There has been a delay, but we will soon be sending beta test copies of the CD-ROM prototype to Council members and other librarians. The search software, Dataware Technologies' Referencebook, provides effective searching, but we need to receive comments related to the "user-friendliness" and overall design of this product.

There is no question that the cataloging and locating project will be a complex one. We look forward to the Council session tomorrow at 8:30 on "Bibliographic Access in an Electronic Environment" and to advice from the Council.

III. STRENGTHENING THE DEPOSITORY SYSTEM

Now, to the subject of library service expectations. As we have said, in addition to tangible and online electronic information from GPO, electronic information from another Government agency's site will be considered FDLP information when we direct and link users to it via our Locator services. Every depository is expected to be able to offer public access to electronic information made available through the FDLP.

The "Guidelines for the Federal Depository Library Program," which were developed with the help of Council, were distributed to all depository libraries in February 1996. Paragraph 7-8 of the "Guidelines" states that:

Appropriate hardware and software must be provided for public users accessing electronic information available through the Federal Depository Library Program (e.g., CD-ROMS, on-line databases, etc.). This hardware and software should include computer work stations capable of providing Internet access that requires GILS-aware software, CD-ROM readers, and printers.

This requirement to provide public access to electronic FDLP information will be effective October 1, 1996. During a depository library inspection, we will use a functional approach to determine compliance with this requirement. The inspector will focus on the depository library's ability to provide public access to electronic FDLP information. The method selected by the depository library to meet this public access requirement is a local determination.

We have also prepared draft "Recommended Minimum Specifications for Public Access Work Stations in Federal Depository Libraries," which describes a single work station capable of meeting this requirement. When finalized, the January 1995 "Recommended Minimum Technical Guidelines" will be superseded. Copies of

this draft are available and it will be discussed at the Council working session tomorrow afternoon.

These recommended specifications are intended to assist depository librarians who are planning purchases of new personal computers for public use. Computer equipment in depository libraries must be sufficient to allow timely and equitable public access to the Government information products accessible via Internet, to CD-ROMS, and should allow printing or downloading information selected by the user. Additional or different capabilities may be desirable for work stations used by library staff. Some libraries may elect to add applications software, such as spreadsheet, word processing, or data base software, to their public access work stations, but this is a local resource management decision.

Depository libraries are encouraged to adapt this menu of specifications to fit local situations. Although these specifications describe a robust multi-purpose single work station, many institutions are providing electronic access in networked environments. We cannot anticipate or address every possible depository library computer scenario. Rather, these specifications are intended to assist depository staff in making informed purchases.

Given the large variation in the size of Federal depository libraries and the numbers of users served, we can not recommend a universal standard for the number of public access work stations in any given library. This must be a local decision based on several factors.

Also, these specifications are not intended to describe the best possible work station. Instead, they are the minimum, or baseline, specifications which should be considered when purchasing new stand-alone public access work stations. We encourage the purchase of equipment which exceeds these minimum specifications. The speed at which computer capabilities are evolving suggests

that a higher initial outlay will result in an extended useful life for the equipment.

Inspection Program

Concerning the inspection program, we intend to change the focus so that the resources devoted to periodic inspections can be reallocated to support and services to depository libraries. Now that the depository library self-study has been adopted as an evaluation tool, we intend that the basis for inspections will be that specified in 44 U.S.C. §1909, which states that "the Superintendent of Documents shall make firsthand investigation of conditions [in depository libraries] for which need is indicated ..."

We will concentrate on site compliance inspections of those libraries which submit unsatisfactory self-studies, have major changes in staffing or facilities, have prior records of non-compliance, or if complaints are received from the public concerning depository library services. Our Depository Services Staff will also be available to visit, consult with, and assist a depository library upon request.

Later this year, we will begin to implement the use of the depository self-study on a wider scale. We will concentrate our initial efforts on those libraries that have not been inspected recently.

IV. PERMANENT PUBLIC ACCESS TO ELECTRONIC FDLP INFORMATION

And finally, to the burning issue of permanent access and retention. Historically, the FDLP, through the mechanism of the regional depository libraries, has guaranteed permanent preservation of, and access to, tangible Government information products. Regional libraries provide the only capability for permanent access to relatively complete collections of tangible government products at locations throughout the country.

I believe that working to ensure permanent access and persistent bibliographic control are the two most important roles for the

Superintendent of Documents and our program in the electronic environment. These are both traditional roles that have been played by the Superintendent of Documents and, I feel, must be continued as a part of Government information policy.

With respect to purely electronic Government information, there is no parallel mechanism to ensure that this information is "archived" for permanent public access. During the study, numerous participants raised issues concerned with preserving electronic Government information.

Our Legislative Task group proposed the following language that "The Superintendent of Documents will coordinate with issuing agencies, the National Archives and Records Administration (NARA), and with Regional and other depository libraries to establish a system so that Government information products available via Government electronic information services will be maintained permanently for depository library and general public access. This system will utilize as one component the electronic storage facility established by the Superintendent of Documents under the GPO Access Act."

We will undertake a coordination role for this overall effort. As a starting point, we will begin with ensuring permanent access to information that is under our custody. Dealing with the agencies regarding information products on their Internet sites will be another matter, however. It is critical that we seek to guarantee that information will still be available in formats that can be permanently accessed and preserved in the future. This will be accomplished by not only GPO, but by other Federal agencies, including NARA, as information is "refreshed" to new mediums for continuing availability and access.

I believe that legislation will be needed to address this major question and others, so, once again, please review the ideas put forward in Task 6 of the study report and we welcome your feedback.

Overview of Compact Disc Standards, Including CD-ROM, CD Write Once, and Photo CD

William Reilly
U.S. Government Printing Office
Washington, DC

"CD-ROM Standards" was to be the title of this discussion and would have made this hour an easy one. At the end of a detailed explanation regarding just CD-ROM the reasons why certain discs will not play in certain CD players would still remain unclear.

We must take on the whole family of CDs and see how they relate to each other and then we will have discovered why they are not interchangeable.

Of course, no one in this room has had trouble playing a disc. After all, if they fit in the player, they should work. Right?

When Philips and Sony began in 1982 with the digital audio musical disc and players they detailed the standards and were given proprietary licenses in a red covered book.

The Red Book standard covers the CD-DA audio disc which is the first of several standards and the one the rest are patterned after.

The Yellow Book followed in 1983 when the same people announced a modification that would allow for the storage of information along with or instead of music. CD-ROM read only memory had emerged.

The Orange Book and Green Book have since emerged as standards that go beyond the Yellow Book standards.

Slide 1

COMPACT DISC STANDARDS

Red Book

Green Book

Yellow Book

White Book

Orange Book

The "Books" of standards describe over 13 types of CD discs

CD-ROM conforms to the Yellow Book and is usually Mode 1

A quick review of the many different types of CDs will help us get started. Then, we will relate these different types of discs to the various standards.

The CD-DA or audio disc is the first and it is the one that plays the music. This is digital audio for the consumer. No more LP albums needed.

The CD-ROM is the data storage disc with read only memory and is the one disc related in every way to the ISO standards. Compliance with these standards insures that the disc will play on players made to meet the standard.

CD-ROM HFS is made to play on MAC platforms and is not standardized.

CD-ROM/XA is based on the CD-ROM standards but has gone beyond the original technology and is not an ISO standard.

CD-I is Philips Motion Video.

CD-I Ready is an audio disc with features for CD-I player

CD-WO is a write-once disc used for writing multiple sessions until a disc is full.

Photo CD is compressed images using the XA technology to permit Kodak to write photos to a CD disc

CDTV is a disc that only plays on a Commodore system.

(The only ISO standard CD is a CD-ROM, other standards are not ISO)

Slide 2

The Ubiquitous CDs			
CD-Audio or CD-DA	Digital audio	Consumer Audio	
CD-ROM ISO 9660	Read Only Memory	MS-DOS, MAC	
CD-ROM HFS	" " "	MAC files	
CD-ROM / XA	" " "	Extended Architecture	
CD-I or CD-RTOS	Interactive	Philips Motion Video	
CD-I Ready	Interactive/Ready	CD-Audio has features for CD-I player	
CD-WO	Write-once	Multiple sessions to fill a disc	
Photo CD	Compressed Images	Kodak XA system may be multisection	
CDTV	ISO 9660 variant	Commodore system	

There are 3 types of track layouts for CD disc, the Red Book and the Yellow Book are both ISO standard 10149.

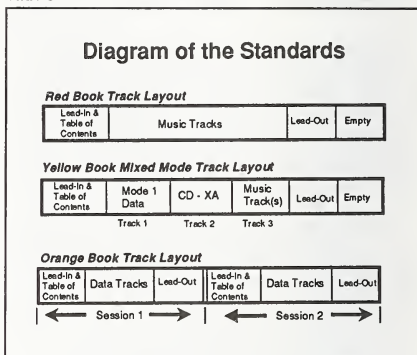
The Orange Book standard is not yet an ISO standard but is very much in use because of Photo CD and multimedia CDs using this track layout.

The Red Book has a Lead-in and TOC followed by music tracks and finishing with a Lead-out.

The Yellow Book can be a Mode 1 for recording data in 9660 format, or Mode 2 for recording sound, images, and video. The Lead-in and TOC followed by the Lead-out are present here only one time.

Orange Book includes the Write Once, Multisession and can write Red, Yellow, and Green Book data. Notice the Lead-in followed by data and a Lead-out can be repeated many times.

Slide 3



The Red Book Audio Track Layout is the basis for the technology and remains a good place to learn about CDs.

Data written to a track is in increments called sectors. Each sector is a small container of bytes of data.

Sectors are read by the player at the rate of 75 per second. The disc can hold 74 minutes of sectors or 333,000 sectors.

To read the disc in proper timing, the speed of the spinning disc must change from 500 rpms at the center to 200 rpms at the outer edge.

Mixed Mode tracks are found to contain a Lead-in and TOC followed by several data types or just one structure of data written to the 9660 standard and a Lead-out. Mixed Mode complies with the Yellow Book standard.

Slide 4

Red Book Track Layout

Lead-In & Table of Contents	Music Tracks	Lead-Out	Empty
-----------------------------	--------------	----------	-------

Philips/Sony developed the Red Book Standard

Data stored in logical units called sectors

1/75 second to read one sector:
 $75 \times 60 \text{ sec.} \times 74 \text{ min.} = 333,000 \text{ sectors} \times 2352 \text{ bytes per sector} = \text{total storage area}$

Between each sector are 882 bytes of error detection and correction and timing control

Disc spins at 200 rpms outside, 500 rpms inside

Slide 5

Mixed Mode Track Layout

Lead-In & Table of Contents	Mode 1 Data	CD - XA	Music Track(s)	Lead-Out	Empty
	Track 1 Yellow Book	Track 2 Yellow Book	Track 3 Yellow Book		

CD containing data and audio tracks

Data can be text or compressed video and motion video

Mixed Mode data is usually copied to the system to be displayed or played

Older CD players can be damaged if they can read data tracks

The Orange Book Track Layout is used for the more exciting products in the CD family. All recordables, multisession, Photo-CD, music, and mixed mode data can be written to this kind of disc.

After looking at the three basic tracks found on a CD it is time to look at how the data is broken down to small containers called sectors of data.

Once again, we begin with the first CD: the Red Book audio structure. Each disc can contain up to 99 tracks. Each track will contain data in increments called sectors of 2352 bytes of data. A CD disc can contain up to 330,000 sectors of data.

Slide 6

Orange Book Track Layout

Lead-In & Table of Contents	Data Tracks	Lead-Out	Lead-In & Table of Contents	Data Tracks	Lead-Out
← Session 1 →			← Session 2 →		

All Recordable CDs

Multisession Hybrid Disc Layout

Sectors written in Red, Yellow, or Green Book

Red = music; Yellow = data or mixed mode

Green = interactive which specifies operating system, to be played on a TV screen

CD audio sectors contain only music and do not contain Error Correction and Detection schemes.

Slide 7

CD-Audio Red Book

Logical units of data called sectors are the subdivisions found in each track

The Red Book describes a sector as a block of 2352 bytes of User Data

2352 Bytes of Data

Up To 330,000 sectors per disc

Lead-In & Table of Contents	Music Tracks	Lead-Out	Empty
-----------------------------	--------------	----------	-------

Up To 99 tracks on a Disc

The sectors used for the Red Book are modified to contain data and EDC and ECC. Each change in sector construction reflects a different usage of the 2352 bytes available in each sector.

The Yellow Book standard also requires 12 bytes of sync and 4 bytes for header information.

Sync is a location address code and header is a sector name, both are required to randomly seek the sectors of data. The computer needs

this data to determine which sector it is reading.

Each 2048 bytes of data written to a sector is verified when read out to assure accuracy of the data in Mode 1. Since Mode 2 contains audio, or images EDC and ECC is not used.

Slide 8

Yellow Book Has Red Book Origins

2352 Bytes of Data

Up To 330,000 Sectors Per Disc

The Red Book Sector shown above is altered as shown below to create the Yellow Book Sectors

12 Sync	4 Header	User Data 2048 Bytes	4 EDC	8 Blank	276 ECC
---------	----------	----------------------	-------	---------	---------

Mode 1 creates ISO 9660 for MS-DOS, Apple, Unix, DVI or CDTV

12 Sync	4 Header	User Data 2336 Bytes
---------	----------	----------------------

Mode 2 creates compressed audio data, and video and pictures may be used as basis for CD-ROM/XA formats

Just as the Yellow Book sector started with the original Red Book design, the Orange Book sectors are based on the Yellow Book Mode 2 structure.

CD-ROM/XA Mode 2 contains compressed audio and computer data interleaved on the same track. This permits the playback of both types of data almost simultaneously which is the defining characteristic of this type of disc.

The Orange Book standard describes a CD-ROM Mode 2, XA (extended architecture) format. The CD-ROM/XA may be written in either Form 1, or Form 2 sector structure.

Orange book sectors begin with Sync and Header bytes but have added Subheader data to the structure. This byte of information is used to specify a file number that identifies all sectors belonging to the same file and defines which type of sector it is, Form 1 or Form 2.

Form 1 sectors are primarily used to store computer data due to the EDC and ECC allocations at the end of the sector.

Form 2 sectors usually contain compressed audio, data, video, or picture data. There is no EDC and ECC coding in Form 2 which allows more room for data storage.

The Orange Book standard requires the use of the Yellow Book Mode 2 sector design as a basis for its unique sector design. Data written to these sectors can be Form 1 or Form 2 as stated above.

The Orange Book also describes the write-once recordable CD types.

Part I refers to CD-MO (magneto optical) technology which means part of the disc can be pre-mastered and part left open for recording electronically. Reading is accomplished by changes in polarization which affect the laser beam. Also, Part I can be 100 percent rewritable. Regular CD players cannot read this disc.

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Orange Book Is Descended from Yellow Book Mode 2

12 Sync 4 Header User Data 2336 Bytes

Up To 330,000 Sectors Per Disc

Yellow Book Sectors shown above are altered to create Orange Book Sectors as shown below

12 Sync	4 Header	8 Sub-header	User Data 2048 Bytes	4 EDC	276 ECC
---------	----------	--------------	----------------------	-------	---------

CD-ROM Mode 2/XA Form 1 used primarily to record data

12 Sync	4 Header	8 Sub-header	User Data 2324 Bytes	4 EDC
---------	----------	--------------	----------------------	-------

CD-ROM Mode 2/XA Form 2 used primarily to record compressed audio data and video/image data to provide synchronization of audio with data

Part II refers to a CD-WO (write once) disc. After the last recording is made, a TOC is written to the disc and a regular CD player can read the first entry recorded. If more than one recording is written to the disc, or compressed audio or video is present, a special board or a purely XA player must be used on this Hybrid disc.

Photo-CD uses this standard for its product. Specifically, Photo-CD is a Mode 2 Form 1,

Orange Book Part II Hybrid disc. Photo-CD uses the CD-Bridge disc format to allow CD-I and CD-ROM/XA players to read this data structure.

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Orange Book In Detail

Orange Book covers Rewriteable (Part I) and Write Once (Part II) standards

Part I, CD-MO: Magneto Optical can be entirely rewriteable or premastered in part and the remainder rewriteable

Part II, CD-WO: Write Once can be a regular or hybrid disc which includes Photo-CD

CD-DA is an audio music disc, the original CD disc written to the Red Book Standard; it plays on a CD audio drive.

CD-ROM is a read only memory disc which follows the ISO 10149 Yellow Book Standard for physical standards, and the ISO 9660 logical standards for file structure. The standards guarantee readability if the standard drive is used for playing. Can be read on multiple platforms.

CD-ROM HFS is a Macintosh product and requires Mac hardware and is not standardized.

CDTV is a proprietary format used by Commodore requiring their hardware for playability.

CD-ROM/XA goes beyond the ISO 10149, ISO 9660 standards and is used to record interleaved data for concurrent playback. Also used by Kodak Photo-CD and other write once products.

CD-I refers to Philips interactive motion video and can be viewed using Philips players and a TV screen.

CD-MO is a magneto optical technology that allows for a rewriteable area on a CD-ROM/XA. If the disc has a premastered area this area can be read on any player.

CD-WO a disc containing one or many recording sessions. Standard CD players can only read the first session but with additional software can be made to read all sessions. Regular WO discs can be read on standard player; Hybrid WO must use an XA player or have the software mentioned above.

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CD Types and Particulars

CD-DA = digital audio, music discs, Red Book, original technology started here

CD-ROM = read only memory, ISO 9660 assures readability, Yellow Book Mode 1, can be read by Apple, DOS Unix, and more

CD-ROM HFS = for Macintosh readers, not an ISO standard

CDTV = Commodore proprietary system using Yellow Book, Mode 1, Level 2 format, requires Commodore's hardware

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CD-ROM/XA = extended architecture, beyond 9660 standard, based on Yellow Book, Mode 2, XA reader needed to play interleaved data and compressed audio and video

CD-I = Philips Interactive motion video, Yellow Book, Mode 2, proprietary design for viewing on TV screen

CD-MO = magneto-optical, can contain premastered data and rewriteable area, requires an XA reader to play

CD-WO = regular CD-WO can be read by basic players because the TOC is written after all recording is accomplished

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CD-WO = Hybrid, regular CD players can only read the first entry on this type of disc

Photo-CD = written to the CD-ROM Yellow Book Mode 2 standard, sector design is the same as CD-ROM/XA which allows for multiple recording sessions with several tables of contents

MPC standard = 386SX microprocessor, at least 2 Mb of RAM, 30 Mb of hard disk space, CD-ROM/XA drive, VGA monitor, audio board, speakers, and Microsoft Windows with the MultiMedia Extensions package

Slide 14

To Learn More Contact :

**Nancy Klocko
Disc Manufacturing Co.
1409 Foulk Road, Suite 102
Wilmington, DE 19803**

**Phone: 1-800-DISC
Fax: 1-302-479-2527**

CD-ROM is the only completely standard product.

ISO 10149 describes the size of the disc, refers to the Yellow Book for track structure and sector structure and guarantees readability.

ISO 9660 is the logical file structure standard and further guarantees readability by assuring read/write compatibility between data on disc and software designed to read the standard.

Directories are assembled beginning with a Primary Volume Descriptor found in logical sector 16. This file points to a path table file which contains directions to all subdirectories contained in the next 7 levels of directories.

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CD-ROM IS THE ONLY STANDARD

Physical Standards are referenced in ISO 10149 which is the Yellow Book

Mode 1 (used for ISO 9660) or Mode 2

Length of a user-data sector

Type of data on each track

ID addresses for every sector and block

Error detection and correction

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CD-ROM IS THE ONLY STANDARD—Continued

Logical Format can be referenced in ISO 9660

ISO 9660 describes and defines sectors and blocks within sectors

The Primary Volume Descriptor is found at the 16th logical sector.

The PVD points to a path table that describes the shortest logical path to every directory

Directories are assembled with a primary root directory and up to 7 levels of directories in traditional hierarchies

Slide 17

HELP!!!

**For: Red Book CEI IEC 908
Yellow Book ISO 10149
ISO 9660**

**American National Standards Institute
1430 Broadway
New York, NY 10018
Sales Dept: (212) 642-4900**

The information for this lecture was taken from the above mentioned organizations and Multimedia, Making It Work by Tay Vaughn; CD-ROM, Facilitating Electronic Publishing by Linda W. Helgersen. The SIGCAT Foundation in Reston, VA also contributed to this study.

Preservation and Archival Issues for Electronic Records: the Center for Electronic Records of the National Archives and Records Administration

Fynnette Eaton

Theodore J. Hull

National Archives and Records Administration

College Park, MD

Access to government information is essential in a democratic nation. It depends, to a large degree, on good record-keeping by government agencies, on the preservation of important records, and on public access to those records. The information in records has considerable value in documenting the vast scope and great diversity of Federal Government activities and functions. Federal records often are the best available sources of information for various kinds of research, including research in history, sociology, economics, and the natural sciences.

The Center for Electronic Records is the organization within the National Archives that appraises, accessions, preserves, and provides access to Federal records in a format designed for computer processing. The Center maintains electronic records with continuing value created by the Congress, the courts, the Executive Office of the President, numerous Presidential commissions, and over 100 bureaus, departments, and other components of executive branch agencies and their contractors. Originally, these records are created or received by agencies of the Federal Government. They may concern virtually any area or subject in which the government is involved. They may be from any type of computer application such as data processing, word processing, computer modeling, or geographic information systems.

Archival Services and Electronic Records Preservation

Identifying permanently valuable records for retention by the National Archives involves cooperation between the Archives and the various agencies of the Federal Government. Through the process of appraisal, the Center identifies and selects the electronic records it judges to have enduring value.

When appraising electronic records, archivists evaluate the contents of the records for their evidential, legal, and informational value and for their long-term research potential. Some of the factors in the decision include whether the information is in its original form, whether the records can be linked with other information, how the records relate to past and present research trends, which Federal agency created them and why, how the information was used, and what impact the records had on Federal programs and policy. Generally, only a small percentage of all electronic records are evaluated as having enduring value.

When the National Archives receives a transfer of electronic records, two copies of the original records are made onto 3480-class tape cartridge, the current preservation media. The Technical Services Branch of the Center for Electronic Records administers the

preservation program for electronic records. Regulations require Federal agencies to submit their records to the National Archives in a hardware and software independent format, on either 9-track magnetic tape or 3480-class tape cartridge, encoded in ASCII or EBCDIC and blocked no higher than 30,000 bytes. Recently, the National Archives has announced the acceptance of data transferred on CD-ROM media, accepting only those records conforming to a select set of 'standard' formats. In addition, any transfer of electronic records to the National Archives must be accompanied by adequate and proper documentation about the contents of the records. Electronic records transferred to the National Archives on CD-ROM will be copied to archival media, namely 3480-class tape cartridge, and the original CD-ROM will be used for reference, when appropriate.

The preservation program of the Center for Electronic Records provides valuable services to both Federal agencies and the general public. The Technical Services Branch has implemented a pro-active program to ensure the long-term accessibility of the records, as the preservation media for electronic records is fragile and deteriorates relatively rapidly compared to other forms of archival records. The branch annually conducts an analysis of a statistical sample of the tapes and cartridges to ensure that the environmental conditions are not adversely affecting the media. The environmental conditions at the National Archives for the storage of electronic records conform to current standards. The preservation program also involves rewinding those records preserved on open reel magnetic tape at a constant tension at normal tape speed every time they are placed on a tape drive. Finally, copies of permanent records are made every ten years to new media, or more frequently when necessary, to prevent the physical loss of data or the technological obsolescence of the medium.

Recently, the Technical Services Branch developed and implemented a new system for the preservation of electronic records. Prior to moving to the new National Archives facility

in College Park, Maryland, the Center conducted the majority of its preservation activity on mainframe computing facilities at another government agency. The system now operational at the College Park facility is the Archival Preservation System (APS). The APS allows for the preservation of electronic records received on a variety of media, such as CD-ROM, onto the current archival media. Alternatively, the APS will eventually allow for researchers to request copies of files not only on the two available media (9-track magnetic tape and 3480-class tape cartridge), but on a variety of output media. This development should enhance access to electronic records for those researchers who do not have access to mainframe computing resources.

The Center's Holdings

In general, the electronic records transferred to the National Archives are themselves evidence of evolution in the application of computer technology in support of program administration, planning, record-keeping, and research within agencies of the Federal Government. A few of the data files were originally created as early as World War II and reflect punch-card technology in use since the 1880s; an even smaller number contain information from the 19th century that has been converted to an electronic format. However, most of the electronic records in the Center's holdings have been created since the 1960s. Numbering well over 20,000 unique files of electronic records, measuring more than 325 gigabytes in volume, the scope of the Center's holdings is quite diverse—as diverse as the activities and interests of the Federal Government itself.

Among the types of holdings or subject areas represented in the Center's holdings are the following:

- a. Agricultural Data (including the Department of Agriculture's livestock and crop production estimates, the periodic Census of Agriculture, 1949-79, and household food consumption surveys).

- b. Attitudinal Data (including surveys about equal opportunity, crime, violence; surveys sponsored by the U.S. Information Agency (USIA), and the "American Soldier" surveys of soldiers during World War II).
- c. Demographic Data (including data from the Bureau of the Census, U.S. Department of Commerce).
- d. Economic and Financial Statistics (including income, labor, securities, tax, trade, and transportation statistics).
- e. Education Data (including data illustrating the variety of education programs of the U.S. Federal Government).
- f. Environmental Data (including records created on behalf of the Presidential Commissions on the Accident at Three Mile Island and the Coal Industry, the Nuclear Regulatory Commission's Radiation Exposure Information Reporting System, and the National Oceanic and Atmospheric Administration, National Ocean Survey's Nautical Chart Data Base).
- g. Health and Social Services Data (including data incorporating both biomedical and sociological information and efforts to measure the effectiveness of a variety of social programs).
- h. International Data (including import-export statistics and USIA-sponsored surveys).
- i. Military Data (including "American Soldier" surveys, Prisoners of War records for World War II and Korean Conflict, casualty records for Korea and Vietnam Conflicts, and a large collection of datasets resulting from the use of computers for military operations, management, and research dating from the 1960s, especially during combat in Southeast Asia).
- j. Scientific and Technological Data (including registers and surveys of

scientific and technical personnel, and data from the National Ocean Survey).

Electronic Records Reference Services

The reference service staff of the Center provides information about the Center's holdings and assists researchers in finding those records that are most useful for their projects. A number of finding aids describe the holdings, including the Title List: A Preliminary and Partial Listing of the Data Files in the National Archives and Records Administration.

Persons seeking information about electronic records should write to the Reference Staff, Center for Electronic Records, The National Archives at College Park, 8601 Adelphi Road, College Park, MD 20740-6001, or telephone the reference staff at 301-713-6645. The Center also uses electronic mail to communicate with researchers; the Internet E-mail address is cer@nara.gov. The Title List and other descriptive materials about the Center's holdings are also available online on the National Archives' gopher/World Wide Web site known as CLIO.

To access the NARA gopher via the Internet, point your gopher client at gopher.nara.gov, port 70 (the default):

[gopher://gopher.nara.gov:70](http://gopher.nara.gov:70)

Researchers can access the Web site with an HTTP client. The URL to use is:

<http://www.nara.gov>

These materials are also available from an FTP site: Use ftp.cu.nih.gov, directory [nara_electronic](http://ftp.cu.nih.gov/nara_electronic). A list of the available files on the FTP site is in the file [read.me](#).

Copies of records in the Center's custody are available for purchase by researchers in a variety of media, with varying encoding. Photocopies of documentation for electronic records can be obtained either with the data or separately. In some instances, the

documentation is available in electronic format or microform in addition to paper. Researchers can also visit the Center's research room to review and self-copy documentation. Currently, the Center for Electronic Records provides researchers with copies of electronic records on either 9-track magnetic tape (1600 or 6250 b.p.i.), or on 3480-class tape cartridge (37,871 b.p.i.). For current information on available media and the cost-recovery fees for reproductions, please request a copy of the Center's descriptive material on services and fees.

A natural outgrowth of the National Archives' improved computer network capabilities and access to information in electronic form in the future may be to provide direct remote access to selected records in the custody of the Center for Electronic Records. The Center is currently planning to build on the capabilities of its electronic records validation system (AERIC), to improve access to information about the records, or their metadata, and eventually to some of the records themselves.

Some records are natural candidates for remote access and retrieval of specific records. In addition to casualty files from the Korean and Vietnam conflicts, other data files for which such capabilities are appropriate are data files such as the quarterly Federal Assistance Awards Data System and annual Defense Contract Action Data System. They have, respectively, records on Federal disbursements of monies to specific geographic areas by program and contracts of over \$25,000 let by the Department of Defense.

However, other large statistical databases, especially survey or sample data, do not necessarily lend themselves to remote access because the records need to be used as full files for analytical purposes or researchers need to identify and extract specific subsets of full files. The Center is exploring using FTP to provide on-line accessible copies of some files, depending on the size of file and other factors. To address the remote access needs of researchers to large, complex data files is a current topic of discussion for future enhancements to the reference services offered by the Center for Electronic Records.

This paper was adapted from the text of National Archives General Information Leaflet 37, "Information About Electronic Records in the National Archives for Prospective Researchers" (rev. 1995) and Theodore J. Hull, "Reference Services and Electronic Records: The Impact of Changing Methods of Communication and Access," *Reference Services Review*, (Summer 1995; vol. 23, No. 2), pp. 73-78.

Access to and Services for Federal Information in the Networked Environment

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Coalition for Networked Information
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The white paper, "Access to and Services for Federal Information in the Networked Environment," is an initiative of the Coalition for Networked Information. It is being developed over a year long period while I am the Visiting Program Officer at the Coalition on a half-time basis. I am also the Head of the Government Documents and Microforms Department at Georgetown University.

The Coalition for Networked Information was founded in March 1990 to help realize the promise of high performance networks and computers for the advancement of scholarship and the enrichment of intellectual productivity. The Coalition is a partnership of the Association of Research Libraries (ARL), CAUSE, and Educom.

The Coalition accomplishes its objectives by focusing on key enablers and obstacles, providing assistance to, promoting communication among, and fostering partnerships with Coalition members; synthesizing progress being made on key initiatives, capturing the experience of Coalition members and others in a coherent, actionable manner; and disseminating lessons learned by those initiatives, amplifying the experience of Coalition members by informing the efforts of others.

The Coalition pursues its mission with the assistance of a task force of over two hundred institutions and organizations that provides focus and resources which are crucial to the ability of the Coalition to articulate and explore shared visions of how information

management must change in the 1990s to meet the social and economic opportunities and challenges of the 21st century. Members of the Coalition Task Force include higher education institutions, publishers, network service providers, computer hardware, software, and systems companies, library networks and organizations, public and State libraries.

The basic premise of this white paper is that with the increasing use of information technologies there has been a significant change in how Federal agencies produce and disseminate information. This results in new and changing user needs and expectations which, in turn, necessitate the need for institutions that facilitate the flow of this information to rethink their responsibilities and capacities in this changing environment.

This initiative will result in a white paper that will guide higher education and others, such as State and public libraries, in the *development of strategies* for providing access to and services by their constituencies in the networked environment. This is **not** a policy paper. The paper will focus primarily on issues and models for collections, preservation, providing access to and services for Federal information. It will address these issues at the enterprise-wide or institutional level. It will also summarize policy and technical directions to provide a framework for understanding the issues involved.

The primary audience for the paper will be:

- Institutional Leaders
- Service Providers/Program Managers

Other audiences will include:

- Associations
- Federal Information Producers
- Commercial Service Providers
- Policy Makers
- Users of Federal Information

Evidence for the paper will be gained by:

- Issuing a Call for Participation
- Conducting a literature search
- Interviewing key players
- Convening focus groups

Our vision is:

- Wide access
- Convenient access
- Timely access
- Long term access
- Ability to customize and otherwise repackaging information

The outline for the paper is as follows:

OVERVIEW

This section will provide an overview of Federal information, as well as define concepts, issues, and parameters, thereby providing a framework for discussion and analysis.

The key points that will be addressed include:

- The role of Federal information in a democratic society
- New patterns of dissemination for Federal information
- Changes in Federal information policy

FOCUS OF THIS PAPER

In order to inform institutions of the challenges and opportunities for reaching the vision outlined above, this paper will examine the following areas:

- Networked Information Discovery and Retrieval (NIDR)
- Service Questions
- Collections
- Preservation
- Management Questions

Networked Information Discovery and Retrieval

Issues:

Mechanisms for locating information are rudimentary and less adequate than systems for other media.

Organization and indexing is chaotic making access haphazard at this time. We will need to develop different strategies to identify, locate, and deliver Federal information.

The necessity of paying for access (which had otherwise been free) and the limiting of passwords, in some access mechanisms, has the potential of hindering access.

Solutions:

Structured document searching capabilities; sophisticated, well-developed search mechanisms to both find and use Federal information.

How is metadata represented in the networked environment?; how to manage machine to machine communication?

GILS will be the standard syntax for describing government information. It should make things coherent so others can come along and add to it.

Service Questions

Topics to be addressed will include:

Information service

Instruction

Role of data/research centers in the manipulation of Federal data services needed by researchers and citizens

Levels and communities of users

Institutional view of services

Collections

Issues:

Who will house this information?

How does the institution decide what to make available and at what level?

Preservation

Issues:

Access for scholarly (and other types) communication in the long term.

Can institutions house this information?

How long will institutions house the information and the implications?

Management Questions

Issues:

Organizational infrastructure

Impact on staff and institution

Staffing and training

Access to the Net and issues such as broad-band width, etc.

SCENARIOS

As an aid to thinking about the future with so many unknowns and variables, this section will formulate a wide variety of alternative scenarios. These models will address all aspects of the questions already defined including issues of funding and budget.

CONCLUSION

Summary and recommendations for:

Institutional policies and practices

Consortial or cooperative arrangements

Applicability to the flow of state, local, and global information

Further study

Knowing Your Local Community: Using Federal Information to Learn About Community Change

Vicky York

Jerry Johnson

Montana State University-Bozeman
Bozeman, MT

This presentation reported on a Montana State University project funded by the Council on Library Resources to encourage libraries as leadership organizations within their communities. It included the showing of the video, *Knowing Your Local Community: Using Federal Information to Learn About Community Change*. The video highlights the role of the Federal Depository Library system and the use of government data for profiling change in rural communities. Three case studies are presented showing how Census and Bureau of Economic Analysis data can be used to understand demographic and economic change in a community or region. The video also describes an interactive video workshop that was held at four depository library sites in Montana. Depository librarians at the sites served as facilitators for the workshop. As part of the workshop, Jerry Johnson presented a case study of one community, describing the methodology involved, and Vicky York covered the portion on finding the data in both print and electronic forms.

The overall goals of the project were to:

- 1) demonstrate the value of distance education technologies (interactive video) to information delivery;
- 2) profile depository libraries and promote cooperation among the depository libraries in the state; and,

- 3) encourage the use of electronic formats for accessing government information.

The project stemmed from the earlier publication of *Measuring Change in Rural Communities: A Workbook for Determining Demographic, Economic and Fiscal Trends*. Participants in the workshop received a copy of the workbook and were encouraged to contact the depository library facilitator nearest them for help in getting started with the data gathering.

As the video shows, the benefits of the project were clear: collaboration among libraries; increased awareness of the role of depository libraries; and better access to information on which to make decisions.

Information about ordering copies of either the workbook or the video is available from:

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Using Older Documents for Historical Research: Serial Set & Congressional Record

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The idea for this presentation was prompted by reference questions posted to GOVDOC-L over the last few years. With so much of our energy focused on electronic sources and access, it's sometimes easy to forget that almost 200 years' worth of U.S. government publications are still in non-electronic format, and some can only be identified through printed indexes, or in some cases, through the knowledge of the librarian.

In 1986, Steven D. Zink wrote an excellent article discussing the reasons why historians often fail to use United States government documents in their research.¹ Among the possible reasons, he cites: inadequate education in their use; inadequate indexing of the documents themselves; reluctance to ask librarians for help.² From my own experience, I would speculate that many librarians, particularly those who don't work with government documents, have precisely the same problems as the historians. I wasn't born a "documents librarian." Much of my knowledge was acquired on the job, thanks to the mentoring of more experienced colleagues. With those thoughts in mind, my goals this afternoon are: 1) to provide an overview of the Serial Set and Congressional Record as sources for historical research; 2) to suggest some strategies for getting access to the material.

Serial Set

What is the "Serial Set?" In simplest terms, it is the cumulation of House and Senate reports and documents, in bound volumes, if your

library selects the hard copy version, or divided by those numbered 4x6 plastic guide cards if you select microfiche. For a thorough description of the Serial Set, including an explanation of serial numbering, I recommend the User Handbook for the Congressional Information Service's Serial Set Index.³

The Serial Set which depository libraries currently receive is composed of large numbers of House and Senate reports. We also receive a much smaller number of publications with the designation "Document," including treaty documents. The "Documents," though few in number, are extremely useful—so much so that they are often issued to all depository libraries in hard copy. Two of my favorites are *The Constitution of the United States: Analysis and Interpretation* and *the Biographical Directory of the United States Congress, 1774-1989*.⁴

The Constitution... Analysis and Interpretation is an article by article discussion of the Constitution, in the context of landmark Supreme Court cases. Its index of cases has been a life-saver for us when someone has a case name but no U.S. Reports citation. High school students and graduate students alike use it as a starting point for background on Constitutional issues.

The Biographical Directory is a convenient, one-volume source of information on all senators and representatives, 11,000 of them, from the Continental Congress (1774) to 1989. Formerly titled *Biographical Directory of the American Congress*, it was first issued in 1949

as a House Document, and is a revision of several earlier biographical directories. The brief biographies take up most of the book, but there's some handy prefatory material, including a list of presidents and their cabinets, Senators and Representatives, by state, for each session of Congress, and delegates to the Continental Congress. The House and Senate documents currently issued are a drop in the bucket compared to what was issued before 1900, the halcyon days of the Serial Set. A gradual decline in the scope of the Serial Set resulted from more stringent regulation of government printing, under the Printing Act of 1895.⁵ The Serial Set and the changes it has undergone are described in a recent article by Suzanne DeLong.⁶

In my quick tour of the Serial Set, I'm going to focus on "documents" issued before 1900 when the Set was quite different from what we see today. During the early twentieth century, it still contained some types of publications rarely found there now, but its real heyday was before 1900. It contains a wealth of information often overlooked by historians, as well as librarians.

American State Papers (ASP)

The American State Papers are that part of the Serial Set encompassing the earliest administrations. It was originally to cover only the 1st through 13th Congresses, but the project was extended to include some publications through the 25th Congress—the Military Affairs class, for example. Systematic numbering of Congressional publications did not begin until the 15th Congress, and the compilation of the ASP was not completed until 1838. That's why the serial numbers of the volumes are always preceded by a 0 to distinguish them from the serial volumes published beginning in 1817.⁷

Here's an example of publications included. Parts of the Lewis and Clark expedition include "Historical sketch of tribes," "Geographical description" of the Red River and adjacent country, and "Meteorological

observations." Other interesting titles: "Troops, including militia, furnished by the several states during Revolutionary War" and "Enlisting minors in army, improving condition of rank and file, by establishing schools, retaining whisky ration, and exempting those serving four years from militia duty." Just to show that times haven't changed, there's this one: "Complaints by cadets against military academy at West Point."

The American State Papers are not complete. In fact, many documents of the War Department to 1800 are missing. In November, 1800, a fire at the office of Secretary of War Samuel Dexter destroyed all of the department's records. I mention this because East Stroudsburg University is home to a project to restore those records from scattered copies. The goal of the project, entitled *Papers of the War Department, 1784-1800*, is to produce a searchable CD-ROM with the full text of newly-discovered documents. Dr. Theodore J. Crackel, retired Army officer and history professor, is the project director and editor. He and his assistant editor are thoroughly scouring libraries and archives throughout the United States for pertinent materials, but would like to hear about any documents they might have missed. These would probably be letters to or from one of the secretaries of war—Henry Knox, Timothy Pickering, James McHenry, or Samuel Dexter—and would most likely be in a library's special collections department. I've included the name of the project director and his address in the bibliography.⁸

Serial Set, 1817-1900

As you've seen from the quick exploration of the American State Papers, some fascinating documents are found there. My motto is, "If you're looking for an old U.S. document, think Serial Set." A good way to get acquainted is to simply browse the "Finding Lists" found in the CIS Serial Set Index. If your library doesn't have that, you might use one of the older indexes such as Poore or Ames.⁹ You'll see titles as diverse as *Contributions to North American Ethnology*,

Congressional Directory, Report of the American Historical Association, Geological Survey Bulletins, Foreign Relations of the U.S., and Consular Reports published as House or Senate documents. A request recently posted to GOVDOC-L was for the loan of Annual Report of Commerce and Navigation of U.S. from the 1880's, and a quick check showed that they were all included in the Serial Set as House Executive Documents. Monographs on some rather unexpected subjects are included: British Military and Naval Operations in Egypt, 1882; War between Chile, Peru, and Bolivia, 1879-1881; Reports on Labor in America, Asia, Africa, Australasia, and Polynesia; Notes on Reindeer.

Before leaving the Serial Set, I want to discuss two gems: the Rebellion Records and the Census. The Rebellion Records document a tragic episode in our history. My library has many volumes in hard copy, but in the 1970's, some were sent away for rebinding and perished when the bindery was flooded (ironically, they were the Naval Records). It was our acquisitions librarian who told me that the entire series was included in the Serial Set, which we have in Readex Microprint.

The Rebellion Records are a vast compendium which includes a general index and atlas. Each series has multiple volumes and parts, too much to include on the transparency. If you're interested in greater detail, CIS Serial Set Index lists the separate volumes and parts in the subject index under the heading, "Rebellion Records."

Last but not least, the Serial Set includes the 7th through 11th Census. These provide statistics on population, transportation, agriculture, manufacturing, and even vital statistics—an enormous resource for charting the growth of our country. Final volumes of the Census for 1880 and 1890 cover some intriguing subjects not found there today.¹⁰ Here are some examples:

1880 (10th, published 1883-85)

v. 8 - The newspaper and periodical press; population, industries, and resources of

Alaska; seal islands of Alaska; shipbuilding industry in U.S.

v. 9 - Report on the forests of North America (exclusive of Mexico)

v. 12 - Report on mortality....Pt. 2, Statistics of deaths, by locality, cause, etc.

v.21 - Report on the defective, dependent, and delinquent classes; statistics of the insane, idiotic, blind, deaf and dumb, homeless children, paupers, and criminals.

1890 (11th, published 1891-96)

Churches in U.S. 1890; Crime, pauperism, and benevolence; Insane, feeble-minded, deaf and dumb, and blind; Real-estate mortgages in the U.S.

These publications are worth looking at just to see how demographic concepts have changed over the century. For example, in the "Population" section of the 10th Census (1880), there are tables showing population distribution "by drainage basins," mean temperature, and maximum temperature.

Of course these early Census compilations don't contain the "Population Schedules," the personal names sought by people doing their family genealogies. Many people are referred to our library because we have "The Census" and are disappointed to hear that we only have numbers, not names.

Subject Indexes to the Serial Set

If the Harvard Guide to American History is still considered the historian's bible, it's easy to understand why they are so reluctant to tackle government documents, especially in the Serial Set.¹¹ The current edition of the Guide was published in 1974. It notes that the Serial Set and hearings are available in microform and cites the CIS Index (which only began in 1970). Unfortunately, the CIS Serial Set Index was not published until 1977, so historians-in-the-making must look beyond the Harvard Guide to learn about that great index.

The Serial Set Index is easy to use. Each part covers a range of Congresses, with a 2-volume subject index and one-volume of Finding Lists.

The subjects and keyword terms are taken from the publication titles. Once you find your subject, you will also find all of the information you need to locate the publication in the Serial Set.

The Finding Lists include:

1. An "Index of Names of Individuals and Organizations" which have been the subject of private laws and other Congressional action. These names are not included in the subject volumes;
2. Numerical List of Reports and Documents;
3. Schedule of Serial Volumes.

If you get genealogy questions in your library, the "Index of Names" may be useful if someone knows that an ancestor was the subject of a claim or petition. I was trying to find a genealogy connection for this presentation, and one practically fell into my lap. My stepmother has been working for years on her family genealogy. She's a very experienced researcher, but on rare occasions, I've found sources of use to her. This time, she called to asked me about some citations she didn't understand. As she read Congress numbers, references to Senate bills, and House Journal pages, I really got excited and asked her to send me copies of what she was reading. What I received was from the *Digested Summary and Alphabetical List of private claims presented to the House of Representatives...* from the 1st to the 31st Congress, exhibiting the action of Congress on each claim with references to the journals, reports, bills, etc. This publication, reprinted in 1970, was originally a House document. The "Preface" to the reprinted edition has some helpful information, including the fact that records relating to the private claims cited are in the National Archives, in the records of the House of Representatives. I needed to find out more about the records of the House. Documents to the rescue again: everything I wanted to know was in a depository

publication we'd put in the Reference Department: *Guide to the Records of the United States House of Representatives at the National Archives, 1789-1989*.¹² Chapter one, "An introduction to research in the Records of Congress" is "must" reading for anyone doing research in United States history. It has an excellent discussion of how to use the Congressional Record and House and Senate journals to search for petitions or private claims. There's a parallel volume for the Senate, and both of these publications were issued as House and Senate documents.¹³

The Schedule of Serial Volumes is of particular value if you have a citation from a footnote or bibliography and need to find the Serial Set volume number. Of course the citation must include at least the Congress number.

What did we do before the Serial Set Index? What do you do if your library doesn't have it? As you can see, the choice is rather limited. Poore's *Descriptive Catalogue* covers the longest period. It has a subject index (which is "defective" according to the Harvard Guide).¹⁴ What that means, in my experience, is blind references which are not on the page you're sent to. Publications are arranged chronologically, so although there may be reference to many pages under a subject, no subheadings are given. If you don't know the publication year, you have to scan each page, a tedious process. That would not be so bad, but the double columns of fine print are particularly hard on old eyes like mine. There are citations to the "State Papers" with the Class (e.g., Public Lands), volume number, pages, Congress, and session. Congressional documents and reports are cited with numbers, Congress, and session. With that information, you go to the "Schedule of Serial Volumes" which will give you the Serial Set volume number.

Ames's *Comprehensive Index* is a magnificent work, and it's a shame we don't have anything comparable for the earlier part of the century. Its coverage is said to be complete for the Serial Set during that period,

although it does not have complete coverage of departmental documents. Arrangement is by subject, with authors in a column on the left, and House or Senate document or report numbers to the right. An especially useful feature of Ames is that many of the periodicals cited are also analyzed. For example, "Grape culture and wine making in Russia" is an article in the Consular Reports, and many other unusual articles can be found. Unfortunately, the CIS Serial Set Index does not index to that level.

The Catalog of the Public Documents...1893-1940 and Monthly Catalog, 1895- are of limited use, simply because they begin so late in the century.

A User Education Problem

In recent years, I find that increasing numbers of undergraduate and graduate students are unable to distinguish between book citations and periodical citations. As you might imagine, something that begins, "United States. Congress. Senate" and ends with incomprehensible numbers and letters presents real problems. Several years ago, it dawned on me that the jargon of legislation is a foreign language in need of basic translation.¹⁵ A simple guide explaining what the common citation means and the location of the material represented helps demystify "government documents" and leads students to materials such as the Serial Set. I suspect that some students omit mention of documents they've actually read because they don't know how to cite them in a bibliography. Any time I take students or other researchers to Congressional publications, I give them the call number for the Complete Guide to Citing Government Information Resources.¹⁶

Congressional Record and Its Predecessors

Congressional Record

Like the Serial Set, the Congressional Record and its predecessors must be mined to yield their historical treasure. What is the

Congressional Record? It's certainly not the "verbatim record of the proceedings in Congress" some people think it is. Since its earliest years, it has been so heavily edited that newspaper accounts of what was said in Congress are sometimes more accurate than what's printed in the Record.¹⁷ Stories abound about remarks edited or censored. For a discussion of that problem, I suggest Schmeckebier and Eastin.¹⁸

As you can see, the Record is only the latest in a succession of serials purporting to report the proceeding in Congress. The Record actually began as a government publication, unlike the earlier titles, which were printed by commercial printers and simply sold to the government. For the century under discussion, we don't have to worry about daily issues and bi-weekly indexes. From its inception, annual indexes of the Record are similar to those we receive today (eventually!).

As you know if you use the Record index, the most detailed subject information is under the names of the legislators. This lack of specific subject headings can be frustrating, but for the subjects that are covered, the Congressional Record can be a useful source of information about contemporary issues and problems. The fact that it has an annual index is a definite advantage. The index to the New York Times for the same period is quarterly or semi-annual through the 19th century, which doubles or quadruples your searching.

Two especially useful sections of the Congressional Record index are the "Histories of House Bills and Resolutions" and "Histories of Senate Bills and Resolutions." These list all bills introduced and give the histories in concise form, including the date on which the bill was introduced and the committee to which it was referred. If you're doing a legislative history, this is certainly the place to begin.

Congressional Globe

In its early years, the Congressional Globe was (like its predecessors, the Register of Debates

and Annals of Congress) more of an abstract than a verbatim report of the proceedings. Each volume has an Appendix which includes materials such as messages of the President and reports of department heads. Beginning in 1853, the text of public laws was included.¹⁹

There are two indexes: one for the Senate, one for the House. It's not an ideal arrangement, but it works. I was trying to decipher some unpublished letters written from Washington in 1873 by a lobbyist. The handwriting was eye-killing, but a phrase that looked like, "Poland bill" kept turning up. Checking the Globe indexes, I found Vermont Representative Luke Poland, and a lengthy speech by him on the subject of the bill.

Register of Debates

To quote one authority, "The publication...was contemporaneous with the proceedings, but the series does not pretend to be a verbatim account."²⁰ Our library doesn't have them, I've never used the Register, so I'm not going to waste time pretending that I know something about them.

Annals of Congress

The Annals weren't published until 1834. Their publisher, Gales and Seaton, compiled them "from newspapers and other sources, the debates from October 1800 being taken from the National Intelligencer." The text therefore represents abstracts of the proceedings, rather than verbatim accounts. That probably accounts for the fact that, within each session, there are separate running accounts for the Senate and House.

Senate and House have their own indexes, and within those, separate alphabetical listings by session—by modern standards, a rather primitive and tedious arrangement. I've found browsing more fruitful than using the indexes.

Alternative indexes

The House and Senate Journals, included in the Serial Set for each session of Congress, have subject and bill number indexes. Although the journals don't give detail, they do give dates of action, enabling a researcher to find the information in the Congressional Globe or Record.

Practical use

I wanted this presentation to be something more than an annotated bibliography, and our local newspaper provided an excellent opportunity to illustrate practical application. The story I'm going to summarize appeared on April 2nd, and since it was from the Associated Press, I assume other newspapers may have run it, as well. The headline was, "Trader's kin seek compensation."²¹ The "trader" in question was Jean Louis Legare, a Canadian fur trader who "risked his life and nearly bankrupted himself getting Chief Sitting Bull to surrender." Legare's descendants are now trying to get reimbursement from the U.S. and Canadian governments for providing, "food, supplies, horses, and wagons" to Sitting Bull and his 50 to 60 followers.

When I read the article to my husband, his reaction was, "a likely story." Was it? Here was a great way to use what I'd just been writing about. It was the kind of question that could be asked in a public or academic library. I had good search keys: the names Legare and Sitting Bull and a surrender date of 1881. It took me about five minutes to find verification of the basic information with the Serial Set Index and Congressional Record. Ames also has the same information as the Serial Set Index. I'll leave the details to anyone interested in looking further—or post them on GOVDOC-L.

Access - More Than Just Indexes

If you want more detail than my sketchy presentation provided, there's no shortage of good books and articles explaining the details of the Serial Set and the Congressional Record. You'll find some of them in the bibliography I've handed out. From the standpoint of service, there are some intangible factors which are also important:

1. Know your library's entire collection, not just what's in "government documents." Although your library may only have become a depository in the last decade or two, you probably have lots of U.S. government documents. Case in point: The series "U.S. Army in World War II." Although these were issued years before our library became a depository, we still have most of the series, and the commemorative reprints issued in the past year are duplicates. Don't take anything for granted—check your holdings. Our online catalogs make it (potentially) easier to identify government documents in our collections—but you have to remember to check!

2. Know what your library has available in microform. The larger your library—the more departmentalized it is—the more likely you'll overlook these things. Our library became a depository in 1966, but we have the Serial Set, 1789-1969 in Readex Microprint and hearings on microfiche. Work closely with whoever does interlibrary loan: it's an inconvenience to your own library users and an unnecessary burden on the lending library if you request something you already have.

3. Educate your library staff, especially everyone who works at the reference desk, where many history research questions begin. Keep copies of your bibliographic instruction handouts there, and emphasize the availability of documents in microform collections. GOVDOC-L is a fantastic medium for sharing our expertise, but I believe we need to publicize the wealth of information in government documents within our own libraries.

4. Last, know what's available in area libraries. It seems obvious, but libraries which are not depositories may have good documents collections in hard copy or microform. Informal partnership can be helpful: in Pennsylvania's State System of Higher Education (which includes East Stroudsburg University), DOMA, the Documents and Map Librarians, compiled a directory which includes what libraries have documents collections in microform: Serial Set, hearings, American Statistics Index and Congressional Information Service microfiche. Ten of the fourteen libraries are now depositories, but even those which aren't have some valuable resources. Since our libraries are scattered across the state, we believe we are providing a service to our Congressional districts, not just to the institutions' students and faculty.

Conclusion

In this era of hard times for libraries, we need to make the most of our collections. Older government documents are an untapped resource, not just for scholar-historians, but for students looking for interesting term paper topics, creative writers seeking background information for novels or plays, or sociologists in search of comparative data. Many of the documents on scientific or technical subjects are still useful. Make U.S. history come alive for your library users: introduce them to the Serial Set and Congressional Record.

1. Steven D. Zink, "Clio's Blindspot," *Government Publications Review*, 13 (Jan./Feb.1986), 67-78.

2. *Ibid.*, 73-75.

3. Congressional Information Service. User Handbook: CIS U.S. Serial Set Index, 1789-1969. (Bethesda, MD., 1980).

4. United States. Constitution of the United States of America: analysis and interpretation... J. H. Killian, ed. (Washington, DC, 1988).

- 99th Congress, 1st session, S. Doc. no. 99-16 (Y 1.1/3:99-16, Ser. no. 13611); Biographical directory of the United States Congress, 1774-1989: the Continental Congress, September 5, 1774, to October 21, 1788, and the Congress of the United States, from the First through the One Hundredth Congresses, March 4, 1789, to January 3, 1989, inclusive. Bicentennial ed. (Washington, DC, 1989). S. Doc. 100-34, 100th Cong., 2nd sess. (Y.1/3:100-34)
5. "Printing Act of 1895," *Statutes-at-Large*, 28, Chap. 23, 601-24 (1895).
6. Suzanne DeLong, "What Is In the United States Serial Set?" *Journal of Government Information*, 23 (1996), 123-135.
7. Congressional Information Service, vi-x.
8. Address inquiries to: Theodore J. Crackel, Papers of the War Department, 1784-1800, McGarry Communication Center, East Stroudsburg University, East Stroudsburg, PA 18301.
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The Internet as a Shared Community/Library Experience

Carolyn Gaswick

Albion College

Albion, MI

Albion College has received a five year grant from the Kellogg Foundation to develop an Internet network within the Albion area. The local network will be tied to other groups to form a countywide freenet. Goals of the grant include the enhancement of communications and the sharing of information resources between the college and the community. It is my responsibility as the depository librarian to determine how government information can best be made available and useful within this local network.

Albion is a private liberal arts college with 1,600 students. We select 28 percent of the depository items. There is one other depository library in our congressional district; Jackson District Library, an 8 percent selective. However, the Albion College/Community grant is one of several grants tied to Calhoun County, and because the Jackson library is in a different county, Albion College is the only depository presence in both the local and countywide networks. As additional background, the city of Albion has a population of 11,000, and the county population is 136,000.

We are involved in this collaborative Internet project because John Kondelik, our library director, took the time to coordinate the writing of a grant proposal. We librarians all planned and wrote, but he saw to it that the parts fit together, and that we all kept to our writing schedules.

The overall planning for Internet access and training in our county has been too shared to be very efficient. Several groups have received grants, each providing some part of the necessary infrastructure or playing a role in Internet access for a specific group; and all these groups are involved in the governing body which plans and coordinates the structure and activities of the countywide network. Every step seems slow with so many people making each decision. When I agreed to speak today, I certainly thought we would be closer to having the Albion project in place and complete than we are. A related HUD grant brought everything to a halt for six months, and until HUD issues were resolved none of the money could be spent. The major Internet groups within the county which I need to keep in mind as I plan for depository contacts include:

The Great Lakes FreeNet which provides connectivity throughout the county by means of e-mail and bulletin board services.

DIAL, Distance Interaction and Learning, provides a countywide enhanced fiber optic network. It includes representatives from the countywide intermediate school district, libraries, colleges and universities, and public service agencies. DIAL will fund interactive studios at high schools and colleges, will establish distance learning to enrich secondary education, and will see that satellite downlinking for teleconferencing is made available. Albion College is a member of this group, and I see depository opportunities for

distance learning with classes and demonstrations about government resources.

CCHIP, the Calhoun County Health Improvement Program, focuses on health and other public service agencies, hospitals, government units, and the transfer of medical and employment service information. It overlaps somewhat with the Albion College/Community group, particularly with respect to the community hospital and governmental agencies, and I'm not clear how to best mesh assistance with government information for this group with support for the fourth group, the Albion College/Community Project.

This project provides for the enhancement of communications and educational processes within and between the community of Albion and Albion College by use of the Internet. The mission for Albion College is to provide leadership and a model for resource sharing within the community. Clearly, there is a role here for a Federal depository library. The questions center on how to best fulfill that role.

The Albion College/Community resource sharing centers on several groups, the kinds I think one would expect in most communities:

- 1) The Chamber of Commerce
- 2) The community hospital
- 3) The Volunteer Center
- 4) City hall
- 5) Schools
- 6) The college
- 7) Libraries, including public, school and college libraries which will share their databases using the Z39.50 standard.

No decision has been made about where public access television will fit into this plan, only that there will be a spot for it.

I'll briefly mention two somewhat related activities. The Albion College Library, as a depository library, has for some time provided Internet access to Federal publications for patrons who come to the library for assistance

or who connect to our library home page; I've maintained a depository home page for some time. However, these services are much more limited than those which will be available when the Albion project is in place.

We are also in the process of adding five years of retrospective documents cataloging records to our online catalog as well as ongoing shipping list and MARC record services. In the past, users weren't able to tell which publications were in our library without actually searching through the collections. With the shared library databases and this cataloging project, access to the materials in our depository collection will be improved and the information will be readily available to many more people.

Initially the college/community grant provides for three public access sites for the Internet: the Albion Public Library, the Volunteer Center and the Chamber of Commerce. The college isn't included in this list because we already have Internet access. Computer equipment and phone lines are provided at those public sites as is user support. A Computer Support Coordinator has been hired to provide leadership for training and the coordination of these activities. Through the training it is hoped that we can build a core of local residents who are knowledgeable about the Internet and who can take advantage of it.

Each of the community access locations serves unique purposes. Thus far I've been providing user guides at the public access sites, the same kinds that I prepare for students, outlining ways to search the Internet for government information. I've compiled instructions outlining the steps to take to get to the documents home page, and I've recommended that people use a guide like Bill Taylor's "GPO Access Searching Tips" which I've listed on our home page.

At the public library members of the community (rather loosely defined to include the surrounding agricultural and residential areas) can sign up for Great Lakes FreeNet accounts and passwords. The public library

has two computers which can be used for Internet searches, and on weekends in particular the sign-up sheets are filled. The library also provides in-library and call-in help, provides handouts with computer set-up instructions, and at cost sells First Class software for the FreeNet.

In conjunction with this project the Friends of the Public Library have made a substantial donation so the public library can provide free Internet classes. The three-session classes include information about basic applications, hardware and software needs, and guidance in using e-mail and exploring the Internet and the World Wide Web. These classes have been very popular; nine series have been given and more are scheduled.

The second site, the Chamber of Commerce, provides an Internet public access point for small businesses to encourage economic development and will, at least initially, serve as a site for small business home pages. Companies that choose to develop home pages at the chamber can transfer them to their own computer equipment when they feel comfortable with the new technology.

The Chamber also plans to serve as a site for a consortium of local businesses where Albion can be advertised as a business setting and where businesses can also advertise their employment needs. Businesses are encouraged to use this site to get the business news and information they need.

I think that in addition to popular government sources like Commerce Business Daily and the Federal Register, STAT-USA would also be useful, but I don't see how I can provide depository access at the Chamber. I understand that STAT-USA needs to make money, but I also wonder just where the figurative walls of an electronic depository library stand.

We've heard this issue raised time and time again this week, and the position I would like to take is supported in the Draft Report to Congress which clearly states in the first goal

of the "Mission and Goals Statement, "...ensure that the public has equitable, no fee, local access to Government information."

The Community Volunteer Center will provide the same kinds of access services for agencies and community volunteer groups. As at the other two public access sites, funds will be available to train people in the use of the Internet, but not for maintenance or repair of equipment. It is hoped that in all three locations individuals will form user groups within the community; the initiatives funded by the grant are intended to provide the stimulus to get people started.

The Community Support Coordinator and I have been working together to see that Federal information can be found and used at the public access Internet sites, and by extension from personal PCs, as well as in our depository library. There are community members who simply don't want to take time to go to the college library to find government information, so I'm trying to make the information accessible at locations which are convenient for them. This is one of the real benefits of electronic access for users, although it makes my in-house community user statistics look rather slim.

I can see that this outreach plan could expand my job as a depository librarian beyond my limits. Our Community Support Coordinator is particularly enthusiastic about having residents e-mail me questions when they aren't able to find the answers. I know I'm not the only depository librarian who already has more responsibilities than I can keep up with, I've heard others express the same concern this week. Still, as we become more electronically connected to each other I think we will have to be flexible about adapting if we are to remain relevant. I certainly haven't worked out all the implications, and I'd like to hear what other librarians think about the issues these potential changes raise.

Internet as a Shared Community/Library Experience in Michigan

Carolyn Price
Flint Public Library
Flint, MI

FLINT PUBLIC LIBRARY COMMUNITY NETWORKING CENTER

The Vision

The Director of the Flint Public Library and the Michigan Mideastern Library Cooperative collaborated on the best way to provide the Flint community with the state of the art networked digital information. Together the ideas of these individuals helped create the living Internet laboratory at the Flint Public Library.

Funding

The following organizations participated in the funding of the Internet lab at our library: University of Michigan School of Library and Information Science Crystal Ed Project, W.K. Kellogg Foundation, Apple Library of Tomorrow Project, Flint Public Library, Mideastern Michigan Library Cooperative, Library of Michigan, and the Community Stabilization and Revitalization Project.

Training

The training syllabus included advanced strategies for effective use of e-mail, mastery of various protocols such as Gopher, WAIS, and FTP. The librarians identified projects with local focus to practice their new skills. The production and mounting of their projects on the WWW was the end result. The projects included local recycling information, local government officials, local resources of funding for small business, and sources of financial aid on a local level.

Accomplishments

Thirty librarians trained in the use of Internet, volunteers trained to assist patrons on use of Internet, development of an information infrastructure at the library necessary for WWW access.

FinanceNet and U.S. Business Advisor

Glynis Long

U.S. Securities and Exchange Commission
Washington, DC

FinanceNet, National Performance Review, Executive Office of the Vice President.
Web access: <http://www.financenet.gov>

FinanceNet (FN) provides Federal and State Government financial information. Government Sales of Assets, Library, Resources, Mailing Lists, NewsGroups and Events are key parts to this on-line government service.

The financial information is valuable to the citizen and private organization as well as to government workers. FN covers electronic commerce, government jobs, Federal pay scales, Comptroller decisions, agency financial statements, and Federal CFOs. It searches the U.S. Code and the Code of Federal Regulations, the GSA Federal Acquisition Regulations, and Foreign and Domestic Per Diems.

Many professional associations have contributed or allow access to their material on-line via FN: Governmental Accounting Standards Board, International Institute of Municipal Clerks, and Government Finance Officers Association.

The States are represented through NASIRE, National Association of Senior Information Resource Executives, which has identified over 1,800 State Web pages and sorted these by subject as well as by State.

The National Science Foundation hosts FN and the Chief Financial Officers (CFO) guide the FN policies and directions in conjunction with a User's Group headed by the Joint

Financial Management Improvement Program of the Treasury Department.

U.S. Business Advisor, National Performance Review, Executive Office of the Vice President
Web access: <http://www.business.gov>

The U.S. Business Advisor is the newest on-line service for U.S. businesses and a key to governing in the information age. Business information on taxes, social security, environmental and safety regulations, annual financial reports and jobs are just some of the Advisor's offerings from the Federal Government.

The Advisor was first presented at the 1995 White House Conference on Small Business; it underwent a six month process to redesign and address the specific needs of the business community. The improved Advisor will provide users with one-stop electronic access to more than 60 Federal agencies which regulate and assist businesses.

The Advisor provides an interactive environment where businesses can: file documents electronically with the government; retrieve documents, applications and other information; get answers to commonly asked questions; obtain names and contact numbers of business agencies; acquire news on specific business topics; and send feedback.

The U.S. Business Advisor exists to provide business with a one-stop access to Federal Government information. There are five major categories:

COMMON QUESTIONS gives answers to questions that business people frequently ask government. Common Questions contains the most asked for information on: Exports, Postal Service, OSHA (safety), Jobs (OPM), Small Business, Taxes, and Social Security.

HOW TO contains expert tools, step-by-step guides, and transactions. **HOW TO** deals with: Address and package your mail, Doing business with GSA, Financing a business, Retired Executive Corps counseling, EPA's partners for the environment, Making your building compliant with asbestos rules, Business forms (Postal Service), Passport-State Dept., Employer's quick reference guide to Social Security, Forms for the IRS, and EDGAR, the SEC financial reports and information.

SEARCH helps you find on-line resources and regulations for topics of interest.

BROWSE contains information and services arranged by category.

NEWS gives current items of interest to the general business community.

The Advisor allows businesses and citizens to browse, search and compile information about their business/community needs. The Advisor is first in a family of on-line information offerings from the Federal Government sponsored by SBA, Department of Commerce and the National Performance Review of the Office of the Vice President.

The Defense Technical Information Center (DTIC)

Holly Wilson
Defense Technical Information Center
Ft. Belvoir, VA

DTIC's Mission

DTIC is the central point within the Department of Defense for acquiring, storing, retrieving, and disseminating scientific and technical information in support of DoD's research and development efforts.

User Community

DTIC's user community is composed of:

Department of Defense components

Defense contractors, subcontractors, potential contractors, grantees

- Raytheon, Mitre, Hughes; but also
- University of Nevada Government Publications Dept.
- Carnegie Mellon U., Electrical Engineering Dept.
- University of North Carolina Research Office
- Cornell University Libraries
- Yale University, Physics Dept.

Other U.S. Government organizations and their contractors:

- Congressional Budget Office, FDA, NIH
- Smithsonian Air & Space Museum Library

Foreign Governments

Registering with DTIC

Registering with DTIC can be quick and easy: DoD/Military Services and U.S. Government agencies -may register over the telephone for unclassified/limited information. Submission of the form "1540" may be required for access to limited or classified data.

Contractors:

- must complete 1540;
- should complete DD Form 2345 - Export Control;
- should register each contract.

Individuals may also register under their own names rather than their organization's name. Contact DTIC's Registration Branch at 703-767-8273 or <reghelp@dtic.mil>.

DTIC's Offices

Headquarters - Ft. Belvoir, VA 703-767-8222
Southwest - Albuquerque . . . 505-846-6797
Midwest - Dayton 513-255-7905
Northeast - Boston 617-377-2413
West - Los Angeles 310-335-4170

In 1995

DTIC celebrated 50 years of service to the DoD

Book - "50 Years of Information for Defense: The Story of the Defense Technical Information Center 1945-1995" - ADA 303 533
Video - "DTIC - 50 Years of Excellence in Information Science" - ADM 000 509

DTIC was recognized by:

- Government Computer News for excellence in the application of information technology;
- Secretary of Defense for our performance in the acquisition and delivery of Defense information.

What Is In DTIC's Collection?

Scientific and technical information
Management information
Work unit information
IR&D (Independent research and development) information

Sampling of Subjects DTIC Focuses On

Aeronautics
Agriculture
Astronomy
Biology
Chemistry
Computer sciences
Earth sciences
Electronics
Energy
Mathematics
Military sciences
Oceanography
Sociology
Space technology
Zoology

Formats in DTIC's collection

Paper
Microfiche
Nonprint

- Video
- Magnetic tape/cartridge
- Diskette

Catalogs of nonprint items are available.

Contributors of information to DTIC's collection

Department of Defense Components
Defense Contractors, Subcontractors, Grantees
Other U.S. Government Organizations
Foreign Governments

Security, Special Handling, Categories of Data and Documents

Unclassified/Unlimited
(publicly releasable information)
Unclassified/Proprietary
Unclassified/Limited
Classified (through Secret)
Classified Limited/Special Category

Collection Development Goals

Complete collection - one stop center for DoD technical information
Greater breadth and scope of coverage
Fewer information gaps
More reliable results

New Collection Policy

To collect the entire documentation of the technology base

Emphasize information collections in:

- Mission areas
 - assessments made to identify mission needs
 - identify deficiencies
 - write plans
- Acquisition life cycle areas
- Policy development areas

Defense RDT&E Online System (DROLS)

This information is made available through the Defense RDT&E Online System (DROLS).
DROLS contains three databases:

Technical Report database (bibliographic in nature)
Work Unit Information summaries (full text)
Independent Research & Development plans (full text)

DROLS Functions

Classified or Unclassified service

Direct access to information about completed and on-going research projects

Interactive querying

Online ordering

Hours: Monday - Friday, 5:30 a.m. to 9:30 p.m. EST (not available on Government holidays)

800 number available for dial-in users

Subscribing to DROLS

Cost:

\$125.00 per year

\$40.00 per connect hour

Cost includes:

- Classroom training
- Workbook and manuals
- Technical Reports Graphical User Interface
- Customer Support

Technical Report (TR) Database

Contains over 1.9 million records

Over 33,000 records are added annually

What Is In DTIC's TR Database?

Technical Reports (Final, Periodic)

Test Reports

Technical Memos and Notes

Studies and Analyses

Letter Reports

Journal Articles

Conference Proceedings and Papers

Dissertations and Theses

DoD Patents and Patent Applications

Command Histories

DoD Directives and Instructions

DoD Security Classification Guides

Gray Literature collected from abroad

FSX Bibliographies

Cooperative Research and Development

Agreement Reports

Scope of Collection

All subjects

All scientific and technical information resulting from or pertinent to DoD research, development, testing, and evaluation (RDT&E) studies efforts

Domestic and foreign documents

Documents that record negative as well as positive results of research projects

Documents that derive from work unit efforts

Technical Report Input By Classification and Distribution Availability

TR Graphical User Interfaces (GUIs)

TRGUI Version 2.0

GoldenGate

TR Database on CD-ROM

Easy to use

Available as a subscription

Price: \$600 for 4 quarterly updates

Records accessioned from 1953 to present

Records arranged by report date

Retrieval enhancements

- term and author listings
- pull down menus
- proximity searching
- full text or field searching
- date specification or date ranging

TR Database via STINET Home Page

WAIS search engine

<http://www.dtic.mil/stinet/>

10 years of data

Unclassified/Unlimited only

Subscription required - \$50 per year

TR Database Products

Demand Bibliographies

Paper copy

User initiated

Full range of search/format options
Cost - \$25.00 per bibliography

Pricing Schedule for Hardcopy Documents

1-100 pages	\$6.00
101-400 pages	\$11.00
401-1000 pages	\$41.00
1001 and up	\$121.00

Work unit information system (WUIS)

265,000 Work Units

What's reported:

- DoD and Non-DoD in-house efforts
- Contractual

When reported:

- Within 30 days after initiation of effort, change, termination, or completion
- Review at least once a year

Work reported:

- All DDR&E-controlled work
- All DoD-funded R&D work by U.S. academic institutions
- All DoD contract studies

Other Categories to Report

Cooperative Research & Development
Agreements (CRDA)

Small Business Innovation Research (SBIR)
program contracts

Unfunded Studies (UFS)

Negative results

Terminated efforts

Contracted Advisory & Assistance Services
(CAAS) - if appropriate

Cooperative Agreements

Unsolicited Proposals

Work Unit Information System (WUIS)

Some data elements reported:

Security restrictions
Distribution limitation
Title
Subject areas
Start date
Estimated completion date
Keywords
Contract/Grant number
Contract type

Other Methods of Accessing WUIS

GoldenGate (a graphical user interface)
WUISGUI (under development)
WUIS on CD-ROM (under development)

Independent Research & Development Database

144,000 IR&D reports

Proprietary

Available to DoD and other prior approved
Federal Government Agencies

Content:

Technical plans initiated and performed by
DoD contractors but NOT wholly
supported by DoD

Available online and CD-ROM

WUIS and IR&D Database Products

Demand Reports

Paper copy
User initiated
Full range search/format options
Price - \$25 per search result

Ordering

By e-mail: msorders@dtic.mil

Telephone

Commercial: (703) 767-8274

FAX

Commercial: (703) 767-9070

Online when using DROLS

Internet:

<http://www.dtic.mil/dtic/docorderform.html>

Internet Training

In addition to DROLS training, DTIC also offers Internet training:

Classes held monthly

- Internet Basics
- Searching the Internet
- DoD/Federal Resources on the Internet

At DTIC or your site

Instructors:

- Ms. Marie O'Mara
- Ms. Holly Wilson

Call 1-800-CAL-DTIC, menu selection 3, option 1

Other DTIC Programs and Services

Manpower and Training Research Information System (MATRIS)

MATRIS provides a centralized source of information on research and products produced by DoD and other government agencies within the areas of:

Human Factors Engineering
Manpower and Personnel
Education and Training
Simulation and Training Devices
Integration of Manpower, Personnel, Training, and Safety (MPTS) in Systems Acquisition

MATRIS Services and Products: A Sampling

Established a Technology Transfer (T2) Web site

Designed FAA/NASA/DoD Aviation Human Factors database

Created the DoD Biomedical Research Database - available via MATRIS & DTIC Home Pages

Directory of Researchers now available on the Internet

Directory of Design Support Methods just published

For Additional Information

Defense Technical Information Center
Manpower and Training Research Information System (MATRIS) Office
DTIC-AM
53355 Cole Road
San Diego, CA 92152-7213
(619) 553-7000

Specialized Services

Historically Black Colleges and Universities
HBCU Program Manager
(703) 767-8222

University Research Support Program
URS Program Manager
(703) 614-0205

Small Business Innovation Research (SBIR) Program

Small (less than 500 employees) technology intensive companies
Two annual solicitations - about 600 topics
DoD SBIR Phase I & II Awards Abstracts
SBIR Phase I Award Selections
SBIR Program Solicitation
STTR Phase I Award Selections
STTR Program Solicitation

Small Business Innovation Research (SBIR) Program

Provide Technical Information Packages (TIPS)

Provide up to 10 technical reports at no charge

Offer extended registration

Contact:

SBIR Program Manager
1-800-DOD-SBIR
E-mail: sbir@dtic.mil
<http://www.dtic.mil/dtic/sbir>

**Corporate Information Management (CIM)
Help Desk**

CIM efforts are directed "to streamline operations and manage resources more efficiently."

The Help Desk maintains a comprehensive collection of CIM information composed of documents, CD-ROMs, videos and software.

Areas covered

- business process reengineering;
- migration systems;
- data administration;
- computer & communication infrastructure

To reach the CIM Help Desk

WWW:
<http://www.dtic.mil/cim-helpdesk>
E-mail: ciminfo@dtic.mil
FTP: <ftp.dtic.mil/pub/cim>
CIM-L: listserv@asc.dtic.mil

Information Analysis Centers (IACs)

Objective:

Help Defense scientists, engineers and information specialists and their contractors to find, understand and use scientific and technical information.

Method:

Collect, review, analyze, summarize, store and disseminate information in specialized areas.

Benefits:

Technical and bibliographic inquiry services

Scientific and engineering reference works

Critical reviews and technology assessments

Special studies/tasks; state-of-the-art reports
Current Awareness; abstracts and indexes

DTIC Managed IACs

Chemical Warfare/Chemical Biological Defense IAC (CBIAIC)
Crew System Ergonomics Information Analysis Center (CSERIAC)
Ceramics Information Analysis Center (CIAC)
Chemical Propulsion Information Agency (CPIA)
Data and Analysis Center for Software (DACS)
Defense Modeling, Simulation & Tactical Technology IAC (DMSTTIAC)
Guidance and Control Information Analysis Center (GACIAC)
High Temperature Materials Information Analysis Center (HTMIAC)
Infrared Information Analysis Center (IRIA)
Metals Information Analysis Center (MIAC)
Metal Matrix Composites Information Analysis Center (MMCIAC)
Manufacturing Technology Information Analysis Center (MTIAC)
Nondestructive Testing Information Analysis Center (NTIAC)
Reliability Analysis Center (RAC)
Survivability/Vulnerability Information Analysis Center (SURVIAC)

For Additional Information

Write:

Defense Technical Information Center
IAC Program Manager
DTIC-AI
8725 John J. Kingman Road, Suite 0944
Ft. Belvoir, VA 22060-6218

Call: (703) 767-9120

Fax: (703) 767-9119

Internet: <http://www.dtic.mil/iac>

E-mail: iac@dtic.mil

DTIC on the Internet

Listservs

Gopher

<gopher://gopher.dtic.mil:70/>

FTP

<ftp://asc.dtic.mil>

<ftp://ftp.dtic.mil>

Home Pages

DTIC home page: <http://www.dtic.mil/>

Listing of all DTIC-produced URLs:

<http://www.dtic.mil/dtic/url.listing.html>

Listservs

MILAS-L Library automation issues

USER-L DTIC users and staff

STINET-L STINET users

GoldenGate-L GoldenGate users

How To Subscribe

Address: LISTSERV@DTIC.MIL

Subject: Leave blank

Message: Subscribe Listserv Name Your Name

Example: Subscribe User-L Barbara Lesser

DTIC'S Defense Technical Information Web

URL - <http://www.dtic.mil/dtiw>

Sample of Contents:

DoD IACs

DoD Contracting Regulations Home Page -

FAR; DFARS; related information

Air Force, Army other Defense agencies

Research and Development Descriptive

Summaries

BosniaLink; GulfLink

News and Current Events

DoD Acquisition Information

DTIC Home Page

STINET Home Page

<http://www.dtic.mil/stinet/>

Cost - \$50 per user per year

TR Database unclassified/unlimited citations

How To Get It - ADA 298 436

DoD Directives and Instructions

EarlyBird - .mil sites only; DoD or other

Federal Government personnel contact

CNARS at: cnars@afisgate.army.mil

(703-695-2884)

Philips Publications

Defense Daily; C4I News; Global

Positioning

Satellite News; Technology Transfer

Armed Forces News Service

URLs of Special Note

Defense Link

<http://www.dtic.mil/defenselink/>

Bosnia Link

<http://www.dtic.mil/bosnia/>

Gulf Link

<http://www.dtic.mil/gulfink/>

Lab Link

<http://www.dtic.mil/lablink/>

TechTRANSIT

<http://www.dtic.mil/techtransit/>

DoD Education Gateway

<http://www.acq.osd.mil/ddre/edugate/index.html>

Directory of Researchers for Manpower,

Personnel, Training, and Human Factors

<http://www.dticam.dtic.mil/www/resdir/resdir.html>

E-Mail Addresses

DTIC and Online Services Registration

reghelp@dtic.mil

CIM Document Requests/Referrals

ciminfo@dtic.mil

Conference Information

confinfo@dtic.mil

Customer Help Desk
help@dtic.mil
Digest Editor
digest@dtic.mil
Document Orders
msorders@dtic.mil

DROLS/Internet/STINFO Training
training@dtic.mil
Retrieval and Current Awareness Services
bibs@dtic.mil
SBIR
sbir@dtic.mil

1-800-CAL-DTIC (225-3842)

Toll Free Calling for:
Reference and Current Awareness Services
Registration
Training/Search Strategy
Computer/Telecommunications Assistance
Status of Orders/ADD
CIM
Products/Services
Tours/Briefings/Conferences
Customer Assistance Help Desk

Customer Assistance Help Desk

Menu selection 7
Callers referred as needed
Walk-ins served by appointment
- Tim McCleery, Librarian, DTIC Special
Programs Branch

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Handbook For Users
DTIC Informational Brochure
IAC Directory - available in paper and
diskette
IAC Video
Products and Services Catalog
Nonprint Products Catalogs
DTIC Digest Newsletter

Request informational brochures from:
DTIC's Products and Services Branch
Address:

DTIC-BCP
8725 John J. Kingman Road, Suite 0944
Ft. Belvoir, VA 22060-6218

Telephone:
703-767-8267

ERIC in the Electronic Age

Tamara M. Westover
The Catholic University of America
Washington, DC

The Educational Resources Information Center (ERIC) is operated by the United States Department of Education, Office of Educational Research and Improvement. Since its inception in 1966, the ERIC database has become the most widely used database among educators in the world, and the format of its bibliographic citations has set a standard for on-line databases. ERIC is appreciated for its comprehensiveness and commitment to capturing documents that would otherwise remain fugitive documents such as conference proceedings, lesson plans, and other highly usable research for education practitioners.

ERIC has successfully served the community for 30 years. Now with the electronic age upon us, ERIC is expanding its services to meet its growing audience. When the database first became networked in 1966, few teachers had easy access to it. But now, with the aid of the Internet, our audience includes more teachers, teacher educators, students, parents, and education researchers than ever before. Based on a June 1995 ERIC Report, an estimated 36,766 users login to ERIC Internet sites each week. ERIC is becoming the nation's education information network connecting virtually all educational information providers and educational information users. The URL for the ERIC System home page is <<http://aspensys3.aspensys.com/eric/index.html>>.

As ERIC patrons become better acquainted with working on the Internet, ERIC is challenged to remain ahead of our technologically sophisticated users. To meet patron expectations, ERIC provides these electronic services on the Internet: E-mail

services for all clearinghouses; the AskERIC Online Question and Answering Service; full text ERIC Digests on-line; excellent World Wide Web pages for ERIC System products and by ERIC Clearinghouses; and, starting this year, ERIC will provide full text delivery of documents over the Internet.

The heart of the ERIC System is still the ERIC database of Resources in Education (RIE) and Current Index to Journals in Education (CIJE). The database expands over a wide variety of resources for practitioners as well as researchers. Some of the resources you will find are: curriculum and teaching guides, full-text ERIC Digests (which are short syntheses of current topics in education), instructional materials, lesson plans, audio visual materials, computer programs, multilingual/bilingual materials, and more.

Getting to ERIC resources and accessing the system is changing profoundly with the personal access users gain from the Internet. If patrons cannot search the database on the Internet from home or the office, many academic and public libraries provide on-line and compact disc services in addition to carrying ERIC indices in print format. To search the database via the World Wide Web, go to <http://www.cua.edu/www/eric_ae/search.html>. Also, the ERIC database is available on CD-ROM through National Information Services Co. (NISC) for the affordable cost of \$25.00 (an annual subscription is only \$125.00). You can order the disc on-line from the NISC home page at <<http://ericfac.piccard.csc.com/nisc.html>>.

The ERIC Document Reproduction Service (EDRS) offers online ordering of ERIC Documents from their World Wide Web page. Patrons can order: the ERIC document collection (on microfiche) which covers all subject areas in education; Topical Bibliographies and Topical Microfiche Collections; the Quick Order service; and, the Quick Search service. The URL for EDRS is <<http://edrs.com>>.

ERIC is more than just a bibliographic database. We have diverse reference and referral services to meet the demands and expectations of our growing audience. ACCESS ERIC, the system's reference desk, provides general reference and referral information. Its staff also coordinates ERIC's marketing and outreach programs and develops publications and instructional materials. Call 1-800-LET-ERIC or send e-mail to <acceric@inet.ed.gov> if you have any questions concerning where to find, how to use, or how to obtain products and information about ERIC. The ERIC System home page, maintained by ACCESS ERIC, is located at <<http://aspensys3.aspensys.com/eric/index.html>>.

The ERIC system is made up of sixteen clearinghouses across the country that collect, index, and abstract recent educational literature within their specialized subject areas. Each clearinghouse provides user services and participates in efforts to increase awareness of ERIC. With the growth of Internet resources, the expectations of our patrons reach beyond the ERIC database. Almost half of all user services are conducted through E-mail and entail performing searches of the ERIC Database and providing pointers and referrals to other education information providers on the Internet.

AskERIC began as a pilot project out of the ERIC Clearinghouse on Information and Technology at Syracuse University in 1993. Since its inception, this program has doubled in volume and now answers an average of 900 patron questions every week.

Staff from nine of the ERIC Clearinghouses participate actively in AskERIC question-answering. Each AskERIC question is forwarded to the clearinghouse with subject expertise and is answered within 48 hours by a reference specialist. A typical response includes a thorough search of the ERIC database, full-text digests, Infoguides, and pointers to Internet resources. You can send your educational queries to <AskERIC@ericir.syr.edu>.

The National Parents Information Network (NPIN) is the electronic question-answering services for parents. NPIN is heavily focused on early childhood education but provides excellent referral and reference information for all parental concerns. Send your queries to <askeece@uiuc.edu>.

The AskERIC Virtual Library is an electronic collection of education resources accessible via the World Wide Web, America On-line, CompuServe, and Gopher. From this collection, users can search a number of on-line ERIC databases: CIJE and RIE, Lesson Plans, and Full-Text Digests. Patrons can also find Infoguides, discussion groups and listservs for practicing educators and librarians, and pointers to other Internet resources in education. Check out ERIC's Javafied World Wide Web page. Go to <<http://www.ericir.syr.edu>>.

ERIC is proud to be the first place where educators look for answers to their questions. However, the description of our role as information providers carries greater responsibilities as the Internet keeps expanding. The challenge for ERIC is to maintain our high quality service as the patron base explodes due to the growth of electronic access and more patrons discovering ERIC services.

Current Issues Facing the Federal Statistical System

Edward J. Spar

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FY 1997 may prove to be one of the most important years for Federal statistics. Issues ranging from reduced budgets, to legislation proposing agency consolidation, to data sharing and confidentiality legislation, are emerging. The following is a brief review of the most important of these issues.

Federal Statistical Budgets

It's still too early to say how hard a year this will be for the Federal statistical agencies. However, if last year is any indication, it will probably be another difficult year (for details of the funding history in fiscal years 1995 through 1997, including a comparison of requested vs. actual allocations for 1996 see the attached table). Given that this is an election year, it would not be unreasonable to see some of the proposed FY 1997 budgets passed before November. Every agency is fully aware of need on the part of Congress to make cuts across the board, and in general, the funding levels for FY 1997 that have been proposed are modest increases over FY 1996.

OMB Releases a Proposed Order Providing for the Confidentiality of Statistical Information

The proposed order is intended to clarify and make consistent government policy protecting the privacy and confidentiality interests of individuals or organizations who furnish data for Federal statistical programs. It is intended to assure respondents who supply statistical information needed to develop or evaluate Federal policy that their responses will be held

in confidence and would not be used against them in any government action. The proposed order established policies to assure "fair information practices for respondents and subjects of statistical inquiries, based upon the concept of "functional separation." Functional separation is achieved by two means: 1) identifying an agency or unit that is purely statistical, and 2) distinguishing statistical from non-statistical functions within a single agency or unit.

Hearing Held on H.R. 2521, The Statistical Consolidation Act

On March 22, 1996, Congressman Steve Horn, chair of the Government Management, Information and Technology sub-committee of the Government Reform and Oversight Committee in the House, held a hearing on H.R. 2521. To review, this is a bill to establish a "Federal Statistical Service" by moving the Census Bureau, BEA and BLS under one umbrella agency. The Service would be headed by an Administrator appointed by the President from among individuals nominated by a newly created Federal Council on Statistical Policy which would also be part of the Service. Members of the Council would include the Chief Statistician, the three Directors of the member statistical agencies, the Administrator, two members appointed by the Senate Majority Leader and two members appointed by the Speaker of the House of Representatives.

There were two panels. The first consisted of representatives from the agencies involved

along with Dr. Janet Norwood and Dr. James Bonnen. Dr. Norwood stated that the bill is "a constructive effort by the Congress to look at how the system operates and how its functioning might be made better." Further, she stated, "While I do not agree with every item in the bill, I believe its approach is an important step towards improving the system." The second panel included representatives of OMB, the General Accounting Office, and the presidents of COPAFS, the American Statistical Association, and the National Association of Business Economists.

Confidentiality and Data Sharing Legislation

The Office of Management and Budget has sent to the Congress a legislative proposal entitled the "Statistical Confidentiality Act." This legislative proposal addresses two issues that are important to ensuring the integrity and efficiency of Federal statistical programs: 1) the confidential treatment of information provided to statistical agencies for exclusively statistical purposes; and 2) the impediments raised by existing law to the effective sharing of confidential information among statistical agencies. The proposal established policies and procedures to guarantee the consistent and uniform application of the confidentiality and also addresses the legal impediments to sharing of data for statistical purposes.

PRINCIPAL FEDERAL STATISTICAL AGENCIES
(total direct funding in millions)

	FY 1996 Budget Request	FY 1996 Estimate	FY 1997 Budget Request
Bureau of the Census			
Current Programs	\$144.8	\$133.8	\$150.7
Periodic Programs	193.4	150.3	248.7
Bureau of Labor Statistics	376.7	344.5	372.4
Bureau of Economic Analysis	51.5	40.5	48.6
Statistics of Income, IRS	29.4	25.7	25.7
National Agricultural Statistics Service	89.8	81.1	85.1
Periodic Programs 1/	----	----	17.5
Economic Research Service, USDA	55.1	53.1	54.9
Energy Information Administration	84.7	72.3	66.1
National Center for Health Statistics 2/	81.4	77.7	88.5
National Center for Education Statistics 3/	95.0	78.8	82.8
Bureau of Justice Statistics 3/	22.0	21.4	22.9
Bureau of Transportation Statistics 4/	22.2	22.2	28.1

Notes:

- 1/ The Presidents Budget for 1997 has proposed the transfer of the Census of Agriculture from the Bureau of the Census to the National Agricultural Statistics Service.
- 2/ Funding levels shown for NCHS include \$27.9 million in FY 1995, \$40.1 million in FY 1996 and \$53.1 million in FY 1997, from Public Health Service Evaluation Funds.
- 3/ Funding levels shown for NCES and BJS do not include S&E from other departmental sources; for FY 1997, NCES will have an estimated \$9.0 million in S&E budget, and BJS will have an estimated \$3.7 million in salaries, benefits, and administrative support.
- 4/ Funding levels shown for BTS include \$2.8 million in FY 1995, \$2.2 million in FY 1996 and \$3.1 million in FY 1997 for the Office of Airline Information.

Some Current Issues in Federal Statistical Policy

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Washington, DC

Hello, my name is Steve and I'm a public data user. I am here today as Vice President of the Association of Public Data Users (APDU) and as chair of the recently formed APDU Public Policy Committee. From this vantage point I am on the outside of the policy arena trying to watch what is going on and, where appropriate, trying to raise issues, questions and observations that will make the statistical policy makers give consideration to other points of view. I also have some 20 years experience in the Federal bureaucracy, primarily working on large surveys in a variety of areas. From this vantage point I have been below the policy, having it dictate certain actions in the survey process.

This afternoon I would like to spend a few moments on my experience at the "business end" of the policy process and then spend a few moments discussing two current issues.

In the mid 1970's, I was working at the Bureau of the Census on the Survey of Inmates of Local Jails. This was a study funded by the Law Enforcement Assistance Administration (an agency that was later rolled into the Bureau of Justice Statistics). One of the hoops we had to jump through in preparing for this study was getting OMB clearance as required by the Paperwork Reduction Act. This law was an effort to minimize the respondent burden of Federal data collections. After all, it was citizens who filled out these forms and if there were too many of them that seemed to ask the same questions they would complain to their congressman, etc., etc., etc. I had very little

to do with obtaining OMB clearance as the Bureau had a staff that removed this administrative burden from the technical offices. All I had to do was explain what we were doing and why it was important and they did the rest. After all, inmates of local jails were not organized to question the study. I was assured the required Federal Register notices would generate little attention.

In the waning years of the Carter Administration I was at the Energy Information Administration working on the "1980 Manufacturing Industries Energy Consumption Study and Survey of Large Combustors." While I had some help with the OMB process, the bulk of the justification and contacts with OMB fell on our staff. In addition, there was a great deal of opposition to this study on the part of the industry respondents. They felt it was burdensome, unnecessary, could potentially give away trade secrets, and raised the possibility of the Federal Government dictating energy consumption levels. The opposition was organized and powerful. So much so that on February 20, one month after the inauguration of President Reagan, the Secretary of Energy received a letter from David Stockman, the Director of the Office of Management and Budget, informing him that data collection authority for this study had been revoked.

Since then I have been very mindful of the power of OMB. In fairness, OMB should not be regarded as a group of sinister people who are trying to subvert Federal survey efforts. On the contrary, I have never sent a

questionnaire to OMB for review that has not come back improved.

Now I would like to discuss two other areas where OMB makes its presence felt in the uniformity of questions that may show up on questionnaires produced by various Federal agencies or in administrative reporting. The first is a standard set forth in OMB Statistical Policy Directive 15 - Race and Ethnic Standards for Federal Statistics and Administrative Reporting.

Directive 15, as it is generally referred to, was developed in 1977 by an interagency group involved in survey design and execution. Simply stated, Directive 15 calls for all Federal forms to have a minimum of four racial categories (American Indian or Alaskan Native, Asian or Pacific Islander, Black, and White) and a minimum of two ethnic categories (Hispanic and Non-Hispanic). The utility of such a standard is clear – it allows one agency, say the National Institutes of Health, to combine its data with that of another, say the Department of Education, to see if educational attainment is a contributing factor to the relation found between race and a specific disease.

In 1993, OMB began some preliminary work to see if there was any merit in revising Directive 15 in preparation for Census 2000. Some of the specific issues that had been raised which caused them to look into the matter include:

Should the Hispanic category be considered an ethnicity or a race? This issue was raised by several Hispanic groups who make the argument that Hispanics tend to think of themselves as a Race. In point of fact, under the current system there are always significant numbers of respondents who say their Race is Spanish, Hispanic, or Latino and fall into a listing under the general heading of "Other." Other racial groups were concerned their numbers would decrease by having an Hispanic racial category.

Should a new Multi-Racial category be added? The current system does not allow for the growing number of multi-racial children who are forced to pick one parent over another in filling out forms.

Should the existing racial categories be split to be more definitive? This issue was raised by various Arab-American groups who feel their needs are being overlooked and their problems are being hidden under the current system which categorizes them as White.

What is the most appropriate Race for Native Hawaiians? Traditionally this subgroup has been considered as Asian or Pacific Islander. However, many Hawaiians feel they should be included with Native Americans since they were indigenous to what is now the United States at the time the first European came to our shores. Traditional American Indian groups are against this change given the implied legal standing of American Indians stemming from historical treaties.

How many generations do you have to have in the United States to be considered a native? Whatever changes would be made had to allow for historical comparability, continued usefulness in tracking possible discrimination in various Federal programs, and remain meaningful for research.

An interagency work group has been looking at these issues for about two years. It has recently tested various combinations of where to place Hispanic, as a race or as an ethnic group, and the inclusion of a multi-racial category. The initial results indicate that only about three-fourths of those who check off "Hispanic" as an ethnic group check "Hispanic" when this category is included as a race. The remaining one-fourth, primarily Cubans, respond as White. Changes in the results for the other categories as a result of including "Hispanic" as a racial rather than ethnic category are:

- the percentage responding as White decreases by over 4 percent;
- the percentage responding in the other three standard categories remains relatively unchanged; and
- the percentage responding with a category not on the list decreases to about 1.25 percent.

Only a very small number of respondents, about 1.5 percent, selected the multi-racial category. The inclusion of this category appears to cause a proportionally large decrease in the percentage who identify themselves as American Indians, Eskimos, or Aleut—0.2 to 0.3 percent decrease against a base of about 1.0 percent of the total population—or volunteer a category, and relatively small proportional change in the other categories.

A final decision on suggested changes to Directive 15 will be made shortly. This will give enough time for public comment, additional refinements, release in final form, and inclusion into the Census 2000 planning.

The other area I would like to spend a few moments on deals with the classification of industry. The Standard Industrial Classification (SIC) has been around, with refinements, some 50 years. Rather than just make a few corrections around the edges, and given the fact that so many changes had taken place in industry over the last 50—vast numbers of new industries and totally new ways of doing business—it was decided to develop a whole new system. And, given the fact that we are now part of an international economy, it was decided to join with our NAFTA partners, Mexico and Canada, to develop one system for the three countries. Hence the North American Industrial Classification System (NAICS).

The major difference between the old SIC and the new NAICS, aside from the addition of many new classifications, is the focus. Where SIC was *market* oriented, NAICS is *production* oriented. This means that producing units which use similar processes are grouped together.

For example, a new NAICS group for "Watch, Clock, and Part Manufacturing" will be made up of that part of SIC code 3495 "Wire Springs" dealing with clock and watch springs, that part of SIC code 3579 "Office Machines, NEC" dealing with time clocks and other time recording devices, and SIC code 3873 "Watches, Clocks, Clockwork Operations Devices, and Parts." Similarly, items that used to be together will now be separated. For example SIC code 7372 "Prepackaged Software" will be split into two codes, one for "Software Publishing" and the other for "Reproduction of Software."

The result of this change will cause problems with those who are interested in time series analyses. While a cross-walk between the two systems has been promised, it will not be easy. In all likelihood, it will be some time before any proposed cross-walk will be in place.

The plan calls for the new system to be in place by January 1, 1997.

In the last few minutes I have given a brief overview of two major changes coming to us as a result of changes in statistical policy at the Federal level. This is not the stuff of great drama nor exposes on the daytime talk shows. I would be willing to bet my pension that not more than 5 percent of the nation even knows there is a standard industrial classification system let alone that it is about to be changed. But as librarians, these changes will most certainly affect your jobs.

Working Toward a Virtual Library

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Introduction

The Naval Research Laboratory, NRL, is the Navy's corporate research laboratory. It is part of the Department of Defense, but relies on sponsor funding for the accomplishment of its research mission. The main NRL campus is located on a 130-acre site on the Potomac River in Southeast Washington. The other primary research locations are at Stennis Space Center in Mississippi and in Monterey, California. All together there are about 4,000 employees and about half of these are scientists, primarily physicists and chemists. The Laboratory also has a large complement of on-site contractors, with about 1,500 engaged in the research effort. The research efforts of the Laboratory are concentrated in 17 broad areas: acoustics, advanced space sensing, artificial intelligence, astrophysics, biotechnology, chemistry, condensed matter science, information technology, materials research, optical sciences, plasma physics, radar and electronics, radiation technology, remote sensing, space science, space systems, and structural dynamics.

The Ruth H. Hooker Research Library and Technical Information Center serves the residents of the D.C. campus and the headquarters staff of NRL's parent organization, the Office of Naval Research (ONR). In addition it provides a number of electronic services to NRL researchers in Stennis and Monterey. The library has been in the forefront in developing services that provide both its local client groups and NRL residents of remote sites with desktop access to information.¹ A brief overview of these

digital services provide a context for discussing the library's virtual library efforts.

Current Electronic Environment

InfoNet

In response to a 1990 User Needs Analysis that showed that researchers wanted information at their desktop, the library developed a campus-wide information system called the InfoNet. The InfoNet provides users with menu-driven access to a wide spectrum of information resources. These include commercial databases, both on CD-ROM and diskette and on-line through OCLC FirstSearch and other vendors; the library catalog; laboratory in-house databases such as the phone directory and supply store catalog; and selected Internet resources such as the Library of Congress and University of Maryland Library catalogs. The InfoNet is available to users independent of computing platform both from work and from home. It's up 24-hours a day, seven days a week. The InfoNet went online in August 1992. It currently has over 800 registered users and is accessed remotely over 3,000 times a month and by end-users in the library another 1,500 times monthly. User surveys show that researchers credit the InfoNet with saving them 2 hours per week on average.

InfoNet provides users with access to text-based information. While some of this information is the actual data the user is seeking—for example, flight information from the Official Airline Guide—most InfoNet databases are the equivalent of catalogs and indexes, serving as pointers to information,

which may be in a book, journal article, or report. Because of the nature of scientific publications, which contain many equations, formulas, charts, and graphs, the InfoNet only partially meets the information needs of NRL scientists.

TORPEDO

To provide all the information that is in the document, the library has developed TORPEDO (The Optical Retrieval Project: Electronic Documents Online).² TORPEDO uses commercial software, called EFS (Electronic Filing System), from Excalibur Technologies. The EFS software provides end users with the ability to search the full-text of documents, using a fuzzy search algorithm. It also provides the ability to browse document collections, say all the articles in a journal issue, and to go directly to a particular article if the volume number and page are known.

Document images can be viewed online or printed locally. TORPEDO currently operates as a client-server system with freely distributable PC Windows and Macintosh clients and X-window support. A World Wide Web interface, currently being beta tested by over 50 NRL researchers, will replace the client-server version next month. TORPEDO has been available in the library since January 1995, throughout the DC campus since May 1995, and to remote NRL locations since September 1995.

InfoWeb

TORPEDO is available through the library's World Wide Web pages known as InfoWeb: <<http://infoweb.nrl.navy.mil>>. InfoWeb serves not only as a point of entry for TORPEDO, but also for many other library services, some the Web-based counterpart of the InfoNet databases. Furthermore InfoWeb serves as a navigational aid for a wide range of information on the Web that the library has selected for its relevance and content and organized to provide a subject approach.

As an interface to TORPEDO, InfoWeb provides a functional front end that tells the user about the system, provides User Guides in Acrobat format, and launches the Excalibur EFS (Electronic Filing System) software on which TORPEDO is based.

Building Digital Collections

Technical Reports

TORPEDO provides the library with the ability to deliver scientific publications to the desktops of NRL researchers. Technical reports published by DoD, and DoD contractors in industry and academia, are one important source of information for the NRL user community. Since 1988, the NRL Library has been digitizing and storing optically its large collection of technical reports. Begun as a space saving measure, with access from within the library only, the digital collection now consists of 125,000 technical reports (about 7 million pages stored as TIFF images). These images are being OCR'd and added to TORPEDO as a key component of the library's digital collections.

Journals

Journal articles are the other information source with which the library is principally concerned.

American Physical Society Projects

In 1993, the NRL Library and the American Physical Society (APS) agreed to work together to test the electronic dissemination of current journals. For this experiment, the APS provides NRL with copies of two of its journals, Physical Review Letters and Physical Review E, as they are printed. Issues are sent from the APS publisher by overnight mail. The library scans the journal to create the TIFF images and OCRs them to generate ASCII text for searching. This process is accomplished the day the issue is received so that it is available to the user community the next day, well before the paper copy is received in the library. The APS also provides, by e-mail,

bibliographic data for each article consisting of title, author, and year of publication. TORPEDO provides access to all issues of both journals starting with January 1994, over 100 issues of Physical Review Letters and 28 issues of Physical Review E.

This effort is a learning process both for the NRL Library and for the APS. Through user surveys and other feedback we're learning what users want and need in a digital information system. By working together to disseminate scientific journals electronically, the NRL Library and the APS hope to determine:

- The attitudes of scientists toward electronic information;
- The attitudes of APS members versus nonmembers;
- The feasibility of disseminating journals in image format over campus networks and the Internet;
- Researcher preferences for electronic format options (e.g., images versus page-definition files);
- The desirable features of future electronic journal systems;
- How publishers and libraries can most effectively cooperate in making electronic journals available to scientists, and how they can effectively integrate them with other materials;
- What kind of controls can be used to prohibit unauthorized users from accessing the system.

In November, NRL and the APS signed a Cooperative Research and Development Agreement (CRADA), under the authority of the Technology Transfer Act of 1986, to further experiment with search and retrieval systems for the dissemination of journal information. Under this agreement, the library is assisting the APS in creating an Internet-

accessible digital archive of its journals. Called PROLA (Physical Review On-Line Archive), the system is being developed for the APS by computer scientists at the Los Alamos National Laboratory. NRL will scan the journals, starting with the years 1988 through 1993, and FTP the images to Los Alamos. The back files for the two journals already online in TORPEDO will be added to the NRL system as well.

Elsevier Electronic Subscriptions

While the availability of two journals has enabled the library to test TORPEDO and demonstrate its capabilities, it doesn't provide the critical mass of information needed to move researchers beyond casual interest. To provide that critical mass, the library will become one of the pilot libraries, the first in the Federal sector, participating in the Elsevier Electronic Subscription Project. Seventy-seven Elsevier journals are currently licensed for this project and are available for beta testing. The remaining 62 journals to which the library subscribes will be added later this spring. Elsevier Electronic Subscriptions provide TIFF images, unedited ASCII text, and bibliographic data in tagged SGML format, relieving the library of the chore of scanning and OCRing.

The library elected to receive and retain this information on CD-ROMs. The Elsevier journals are shipped to NRL on 4 CD-ROMs per month. A short program has been written to mount the Elsevier journals in native CD-ROM format, point to the defined directory structure, and index the full-text so that it is concurrently searchable along with the other documents in TORPEDO. Once the CD-ROM is received by the library, the new journals are available to the NRL/ONR community at 2 a.m. the next day (even on weekends), after the index has been rebuilt and restarted.

First-time access to an article requires that the appropriate CD be mounted, which, because this is a mechanical process, can take as much as 18 seconds for a single user. However, once an article has been used, it is automatically cached on RAID (Random Array

of Independent Disks), so that all subsequent retrievals are essentially instantaneous. This arrangement allows the library to use low cost, but also slower, near-line storage, while assuring rapid access to frequently requested documents.

Planning The Virtual Library

A major thrust of the library's future efforts will be transitioning its electronic information services to the World Wide Web and expanding relationships with publishers and other document providers.

InfoVision/2000

Web access to all library information services, and to journal information in particular, was strongly recommended by a Study Team that met in February to evaluate the library's vision and plans and to recommend to NRL management steps to effect a 21st century NRL information environment. This study, called InfoVision/2000, was carried out at the request of the NRL Director of Research, by a 13-member team composed of NRL division heads, NRL and ONR researchers, and external experts from academia, other government organizations, and the publishing community.

Vision Statement

In preparation for the Study Team meeting, the library developed a vision and set of three goals for creating a digital, or virtual, library. The vision as set forth by the library and endorsed by the Study Team states:

In an increasingly digital environment, the Ruth H. Hooker Research Library and Technical Information Center will provide the Naval Research Laboratory with a centrally planned and managed information infrastructure to enable NRL and ONR researchers and other knowledge workers to meet their information needs conveniently, consistently, and cost effectively, anywhere and at any time.

Goals

To achieve this vision, the library adopted three goals, which, with minor modifications, were likewise endorsed by the Study Team. As modified these goals are:

- Build digital collections that effectively meet Laboratory scientific and technical information needs;
- Provide uniform, transparent, and convenient access to both locally mounted and world-wide network-based information;
- Provide leadership in creating a shared NRL knowledge base, maximizing the utility of the library's information storage, retrieval, and delivery capability.

Expanding Web Access to Information Resources

To meet Study Team recommendations, the library is working quickly to transition a number of its telnet-based InfoNet services to InfoWeb. In addition to the TORPEDO Web-based interface and the availability of the Elsevier journals discussed earlier, the library will introduce three other new InfoWeb services in May:

- Web access to the library's catalog of book, journal, software, and report holdings;
- Web access to the OCLC FirstSearch databases;
- Web online subscriptions to an E-mail tables of contents service for most journals in the library's collection.

Because it has found the networking of CD-ROMs to be a cost-effective approach for delivering information to the end user, the library is looking for a method to network CD-ROMs, currently only available through the telnet-based InfoNet system, via a Web

browser. The alternative, licensing the raw data and providing a local search engine, is also under consideration.

Expanding Electronic Journal Access

Handing Other Formats in TORPEDO

During 1996, the library plans to develop its capability to handle the other formats that publishers are currently providing or plan to provide. Portable Document Files, such as Acrobat, seem to be the most likely alternative to explore at this time as more and more publishers are able to provide journals in this format. The American Physical Society has Acrobat files for its entire Physical Review series and has agreed to provide them to NRL for incorporation into TORPEDO. The library plans to use the corresponding SGML text, which the APS can also provide, as its searchable text database, eliminating the scanning and OCRing process entirely, and positioning the library to work with a greater number of publishers in disseminating journal information electronically.

InfoWeb Links to Publisher Web Sites

While many publishers are making journal information available through their own Web sites, each journal, or the Web-published journals of each publisher, must be searched independently. TORPEDO, on the other hand, allows a researcher to search across all the journals in the library's collection that are available electronically.

While access to many journals to which the library subscribes is currently available through InfoWeb hyperlinks, this is thought to be an interim measure that only partially meets the needs of the user community. In addition to requiring that a researcher know the publisher of a particular journal, it assumes that the researcher has narrowed his search to the point of knowing where to look for the information. Configuration issues, such as passwords and IP addresses, have also been difficult to negotiate with vendors for implementation on InfoWeb. In addition,

response time from publisher servers has been found to be inadequate. Negotiations are therefore underway with a number of publishers providing site access to their journals on the Web to add these journals to TORPEDO instead.

Conclusion

The NRL Library is well on the way to providing its research community with a "virtual library." With the InfoWeb System, it is providing researchers at their desktops with targeted, organized, annotated, and searchable access to a large number of local and remote information resources. With TORPEDO, it is providing powerful search and retrieval tools that enable end users seated at their computers or workstations to use Web browsers to search, view, and print the contents of large collections of library materials.

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Access to Federal Information on the WWW: The Public Library Perspective

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Good morning. I would like to thank Sheila McGarr for inviting me here and for giving me the opportunity to talk to you.

I was asked to speak on the subject of access to Federal information on the World Wide Web from the public library perspective. Lily Wai was the one that recruited me for this "job." I am honored to be here, and to be able to share with you my thoughts on this topic.

It seems appropriate to begin with an overview of the Internet accessibility to the public libraries in general. The question of "How the public libraries access governmental information?" becomes secondary to the question: "Can they access it?", in other words, "Are they connected to the Internet?"

According to the ALA, the United States has over 9,000 public libraries. More than one-third of them don't even have a computer, much less an Internet connection. One in five public libraries has an Internet connection, but only 13 percent of Internet-equipped libraries offer public access terminals. Much of the Internet access is restricted to library staff for administrative and reference processes. E-mail is the most frequent activity, followed by resource searches. Fewer yet provide Internet gateways that patrons can use from home. Only 17 percent of rural libraries are on the Internet, compared with 79 percent of urban libraries.

I have read an article in the January 1996 issue of the *Computers in Libraries* magazine,

the *Internet Librarian* section, that cites the statistics from the ALA Press Release of August 30, 1995.

A recent survey conducted as part of the Public Library Data Service "Statistical Report '95" polled 369 public libraries serving populations of at least 100,000. According to the report only 23 percent of the surveyed libraries provide direct public access to the Internet and another 5 percent provide public access with staff assistance. That leaves an alarming number of almost 70 percent of all libraries that serve populations over 100,000 that are *not* connected to the Internet. One can only speculate on the fate of all smaller libraries that serve rural communities or libraries situated in low income areas. The survey does not provide any information on the type of access: Netscape, LYNX.

Unless drastic measures are taken, many public libraries and the communities they serve, will be left behind with the grim prospects of never going beyond the year 2000.

I want to voice my concern for this situation. Governmental information is migrating into the electronic media with the speed of lightning. Soon, only the core of Federal documents will be still available in a printed form. What is going to happen to the libraries that will not be able to afford computers? And what will happen to their users deprived of the information that is rightfully theirs? More important, what will be the role of the public library in the next century?

In view of this situation, I thought it would be appropriate to recount the St. Charles City-County Library District's Internet success story. It is an example of one avenue available for public libraries to explore in their quest for the Internet connection. If it weren't for this success, I wouldn't be talking to you today.

While less than 25 percent of public libraries provide public access to the Internet, the St. Charles City-County Library District has direct Internet access with over 100 stations in six branches, out of which 50 are for public use - six or more stations per branch. The library is one of the original sponsors of the community information system WIN. WIN, the Westplex Information Network, a freenet, grew out of a series of discussions between the St. Charles City-County Library District, the City of St. Peters, the St. Peters Fire Protection District, the St. Charles County Community College, the St. Charles County Government, and several other organizations in 1993.

MOREnet, the Missouri Research and Education Network, was selected to provide WIN with access to the Internet. MOREnet, at that time, was already successful in developing three other community networks, and the DESE project, the Department of Elementary and Secondary Education project, designed to provide Internet access to all Missouri school districts.

In early January 1995, WIN opted to work with MOREnet in developing the WWW implementation of the community information network. Originally, LYNX, the textual browser, was used in the basic development stage of the network. In April 1995, Netscape was installed in most of the branches. As of now, all our branches provide access to the WWW.

Among other benefits, WIN also offers free access to the Internet to all of the county residents, and for a minimal fee of \$6.00 per month, a SLIP connection.

The next step for the St. Charles City-County Library District was to establish its presence

on the Internet, which meant building home pages.

For me it has been a serendipitous journey that started in May 1995. I was recuperating at home from a car accident. Reading, listening to music and eventually surfing the Net kept me busy for eight long summer weeks. Inflicted with a professional preoccupation I focused on professional home pages, and after a while became familiar with most of them. I have found many superbly constructed, comprehensive sites, immaculately arranged, often detailed with annotations and with numerous links branching into endless labyrinths of the cyberspace.

Bruce Maxwell, in his presentation at last year's Federal Depository Library Conference, cites over 1000 comprehensive governmental sites on the Net. His count is probably right. What struck me while visiting these sites however, was the fact that none of them were geared toward the public library audience. And the public library does have different needs.

I came across an article written by June Parker in the January/February 1996 issue of the *Journal of Government Information*. Parker in "Evaluating Documents Reference Service and the Implications for Improvement," suggests that there are no known statistics on who uses government documents in libraries, why they are used, and which categories of materials are used the most. The article evaluates reference services in academic libraries.

The most recent article by Richmond and McKnelly, in the same publication, March/April 1996 issue, addresses the same problem, again from the academic library perspective. The use of government documents in public libraries has never been formally surveyed, as far as I could establish.

I have spent the last ten years working as a reference librarian for two large public libraries in the St. Louis Area: the St. Louis County Library, which serves a population of

over two million people, and the St. Charles City-County Library District, just west of the St. Louis Metropolitan Area, that serves over 250,000 residents. I have learned a lot. Without formal statistics I can tell quite accurately what governmental documents are used on a daily basis. I am also aware of the "document phobia" which inflicts not only the users but also my fellow librarians. The sum of these experiences proved to be invaluable in the construction of my home page.

Government documents are used by a variety of people for different reasons. Academic libraries have their own clientele, as do special libraries and public libraries. Two in three Americans go to a public library each year, according to ALA. More than one-third of all users are children. Fifty-three percent of adults reported library use in the previous year. Contrary to a common belief, younger people visit the library more frequently than the older. Two-thirds of 18-24 year olds used the public library, versus one-third of people aged 65 and older.

Public libraries encounter a set of circumstances that are unique only to them. They serve a very inhomogeneous group of people. Their users come from all walks of life; they come in all ages; they come with different socio-economic and educational backgrounds; some have no education; others have some; yet there are those who are professional people, with graduate degrees and know what they want and how to ask for it; others may have problems in formulating the question; many have never seen a computer, less searched the Net; others searched occasionally but never learned the basics. Some, of course, are familiar with the Internet, with the World Wide Web, and with various methods of searching. In other words-*there is no typical public library user.*

My goal is to provide an easy access to Federal documents for even the most inexperienced public library user. In order to achieve that goal I often have to repackage the information I find on the Web.

"Access, represents the customer or user and encompasses the terms distribution and dissemination... Access ... must mean one other thing. It must mean usefulness."

These are J.D. Young's words from his remarks at the fall 1995 Depository Library Council Meeting.

My definition of "usefulness" encompasses the audience, the appropriate sources for that audience, and their presentation; in the case of a home page, their arrangement. For a source to be useful, it has to be the *right source for that particular audience offered in the most appropriate way.*

The Federal and State Information from the St. Charles City-County Library District home page is comprised of links to documents that are most frequently used by the public library's users. When available, I offer a direct access to these documents avoiding multiple hyperlinks or a sub-menu structure. The arrangement is simple but logical—a broad subject division. I consciously avoid listing by agencies. My experience tells me that most people who use documents have no idea where they originated.

The home page that dates back to September 1995 has been perpetually under construction. For those of you who might be interested in visiting it, I have recently grouped the links together in broad subject areas, and arranged them alphabetically, hoping to provide a better and easier access to the sources. As always comments and suggestion are welcome.

The URL for Federal and State information from the St. Charles City County Library District is:

<http://www.win.org/library/mats/govdocs/homepg.htm>

Over the months the page has undergone several transformations. As the number of links grew I became aware that a long list of links merely arranged alphabetically or by

chronology of their "discovery" is impractical. And so, I chose a broad grouping by subject hoping that its simplicity will prove to be useful to users.

I have also included several comprehensive sites. I believe that constructing a home page can be compared to a process of collection development. The individual links can be viewed as selected items while other documents can be found going to sites like the Federal Web Locator, FedWorld, or others.

Most of my links have been harvested from comprehensive sites on the Web and placed directly on my home page. I also regularly check other sources for WWW governmental information:

- The Internet Connection: Your Guide to Government Resources by Bernan Press
- Information Today
- Computers in Libraries

and others.

Daily, I check the GOVDOC-L, which provides the best and quickest way of finding information about Web activities.

The evaluation process of a link to be considered for my home page consists of checking its:

- user friendliness
- viability
- accuracy of information
- timeliness of information
- reliability of its point of origin.

I prefer to select the "official" sites maintained by the Federal agencies or from State universities and colleges. However, I will add a commercial link when it proves to be superior or in the absence of a similar site. For example, I added the Federal Jobs Digest, which is maintained by a commercial provider.

The links are added and removed depending on their usefulness. This is one of the advantages of being your own publisher - freedom of choice! I am a "one-person-operation" and experience both its benefits and its downfalls!

As I mentioned before, the arrangement of my home page is simple. The "front page" items, like the Telecommunication Act of 1996, or the links to Presidential Race 1996, are placed at the very beginning of the Federal Information section. All other items are grouped informally in broad subject areas:

1. Major Statistical Sources. (with an added statement: "Check Also Individual Topics For Other Statistical Sources!")
 - a. The County and City Data Book (I am not too happy with this choice, but some people like it)
 - b. The Governmental Information Sharing Project from the Oregon State University. Absolutely the most popular of all, also one of my favorites
 - c. The Statistical Abstract of the United States, which I wish was key-word searchable!
 - d. The World Factbook, 1995
2. Business/Economy
 - a. Business Cycle Indicators: Data Extraction—a searchable site from the School of Business, University of Alabama at Birmingham, that covers years 1970-1996. The BCI used to be part of the Survey of Current Business publication until 1995.
 - b. Commerce Business Daily from a commercial provider, Loran Data Corp. Although the CBD is included in the STAT-USA account, I felt it was worth placing it here—it offers a free access to the most recent issue, and no password is required!

c. EDGAR - I hope that its database will eventually cover all the companies required to file with the SEC.

d. Information about the EE Savings Bonds. This commercial site allows the patron to calculate their bonds' value by the face value, issue month, issue year, redemption month. Years covered: 1980 - 1996.

e. The SIC Manual - searchable; from OSHA

Other sites here: the SBA, the Statistics of U.S. Businesses, U.S. Economic Indicators, and more.

3. Census Information

a. 1990 Census Data Lookup, a site that is used most frequently. Sometimes a bit tedious to use, nevertheless, well received and appreciated.

b. Population Division Home Page, from the Bureau of the Census.

4. Educational/Environmental/Social Links include

a. The EPA documents

b. FannieMae information on housing, lenders, home buying, etc.

c. Federal Jobs Digest from a commercial provider

d. Federal Jobs Search from FedWorld

e. GSA's Catalog of Federal Domestic Assistance

f. National Center for Missing & Exploited Children, a new item covering issues that are at the heart of everyone in this country. Includes the Missing Children Database which is searchable by several criteria.

g. Social Security Online

h. Uniform Crime Report for January-June 1995

The environmental links will soon migrate from this list to a new environmental home page that will include numerous FEMA and related sites. I plan to cover the subject of: floods, earthquakes, hurricanes, tornados, their management, helpful tips, addresses, phone numbers, etc. As we all remember, the flood of 1993 created new awareness of these issues. I hope to be ready with this home page this summer.

5. Laws/Regulations

I have included here both Thomas and GPO Access to which I have provided three access points: access from GPO, from Purdue University and from the University of Tennessee, Knoxville. You will also find here the CFR, and the Decisions of the U.S. Supreme Court.

As I mentioned before, I have incorporated several comprehensive Federal Web sites on my home page. Namely:

1. The Federal Web Locator from the Villanova Center for Information Law and Policy

2. The FedWorld

3. A link to Larry Schankman's home pages (for the brave at heart)

4. Several GPO links

5. The Spirit of UCONN from the University of Connecticut

6. The Statistical Resources on the Web from the University of Michigan Documents Center

Although I consider most of the comprehensive sites too cumbersome for the inexperienced or even the average public library searcher, nevertheless, I felt that my

home page would not reflect accurately the Federal information available on the Web without their presence. Also, I had to keep in mind the experienced user who likes to visit comprehensive sites which allow him the freedom of searching.

In conclusion of my presentation, I would like to stress the necessity of diligently searching the Web for new sites, and continuously reviewing all links on a published home page. In the "age of transition" we will have to rely more and more on our own ingenuity. The core paper collection will have to be heavily supplemented with electronic formats. How the users will access Federal information will depend on us—we are the ones that will have to provide a user-friendly access. Hopefully, the agencies responsible for their publication will provide us with user-friendly and timely documents.

Lastly, I would like to remain hopeful for the future of the public library and its access to the Federal information on the Web.

The World Wide Web at a Small State University

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Good morning. During my 15 minutes this morning I'll talk about the use of the Web in a small, poorly funded State university. My primary motivation in library use of the Web, and the one thing that has made the big difference for me professionally, is information content (what I often call the "good stuff").

First and foremost, I consider myself a reference librarian. Unfortunately, my library does not enjoy the same ability (i.e. budget) to acquire value-added print and electronic resources as wealthier institutions. Now, until a few years ago I could only sympathize with our patrons who needed materials that we did not own, and hope they would either wait up to two weeks for inter-library loan or accept my excuses. This saddened me horribly, especially since library school taught me to avoid the dreaded "N" word (No!) like the plague.

But now, with the near instantaneous, worldwide resources of the Internet, I can insert the "Y" word (Yes!) more often into my reference desk vocabulary. "Yes, I can get that for you. Any preference for format?" And this pleases me immensely. Indeed, I appreciate the Internet as a great equalizing force for information access. As a documents librarian I take even further delight in the fact that most U.S. Government information is non-copyrighted. Thus, our school enjoys much the same access to information, at least in the public domain, as do the richer, larger universities.

But as more and more Web sites pop up every day, it seems harder and harder to find rich content, especially those texts and data which we librarians would refer to as ready reference. For these reasons, and given that our book budget will not increase, I set a goal for myself shortly upon my arrival at Mansfield University to improve the information resources for our students, faculty and staff. Since we needed money, I wrote a grant application. And after several changes and an initial rejection, we finally received about \$90,000 in LSCA Title III funds to enhance public access to government (and even non-government) information.

In addition to many neat toys, some of which I have just now ordered (such as a CD-ROM recorder and multimedia authoring software), we were able to substantially upgrade our Internet services and install a CD-ROM network. With the addition of two 14-disc towers, we are now able to serve government CD's to our own students, as well as to our grant partner, the J.V. Brown District Library in Williamsport, PA. Through the Brown Library we provide electronic government information to about 20 participating rural public libraries.

The first stage of the grant involved creation of several Web pages. Beginning with the government and statistical data pages, this project has asserted a life of its own. I certainly never expected Web page maintenance to become such an all-consuming experience. Nevertheless, I have now created dozens of pages, on a

variety of topics. In fact, I have even had to remove several pages as a result of insufficient time with which to adequately maintain them (the expression "get a life" often comes to mind).

In many ways, this project seems to me a harbinger of things to come. After the implementation of GPO's Transition Plan I can imagine an even greater need for depository librarians to help train and support smaller and less sophisticated libraries in their congressional districts. Besides, if we choose to expand our traditional role as educators we could perform an even more rewarding community service: more documents to more people, 24 hours a day, from any connected location, clothing optional.

In this spirit, the second component of our grant consisted of several workshops conducted for public librarians. These workshops focused on government information and the services now available to them through our network via telnet, the Web, or toll free dial-in access. For our first workshop, conducted as a traveling "road show," we produced a show-and-tell of our favorite government documents. We later offered one workshop each on Internet government resources and the depository compact discs provided through our CD network.

I will now demonstrate the three basic uses of the Web in my library.

a. Local, Secure Menuing System

Recently I have set up an experimental Web page which can launch any program we decide to offer our patrons. The Web page itself is rather typical, except that we use a Web browser (Netscape in our case) to access local applications, CD's, and local files, in addition to Web resources. Since we do not have time to discuss the techniques and software necessary to make this work, I have set up a Web page which describes and illustrates everything you need to set up a secure menu yourself, using your favorite Web

browser.¹ The advantage to this system is that we can utilize Windows at the reference desk without the confusion and inherent problems associated with Program manager (minimizing or moving around icons, security, etc.).

b. Remote access to information and data

In many cases students and faculty request materials which are either unavailable at our library, or too inconvenient to find in print. Especially in the case of data and more obscure text, our subject librarians and support staff (including student reference assistants) have as much difficulty identifying and locating materials as the requester. To forestall such embarrassing moments I have put links on our library home page² to many useful government and full-text resources. Even when we own the needed material, Web access proves far more convenient than hunting down individual documents. As an example, we have set up a demographics page just for local and county data.³ Perhaps an even better example, since so many people are unaware of where to find it, is the map of our state's Federal legislative districts.⁴

c. Online Pathfinders and Library Guides

Now that many, if not most, of our students have become accustomed to browsing the Web, we can offer online library guides formatted in HTML. Not only does this save on the cost of paper, but it helps the environment as well. Besides, I am not so naive as to discount the likelihood that students, when provided handouts and other print resources, will immediately throw them away. Moreover, Web pathfinders just look better, and in the case of guides to online resources, link directly to the highlighted site. Pathfinders used at Mansfield University include guides on Federal legislative histories,⁵ Federal regulations,⁶ and statistical data available in and out of the library.⁷

The final phase of our grant will come to pass this summer, when I hope to learn some programming techniques. In addition to a CD Recorder, I have acquired a color scanner,

graphics software, and the latest versions of Visual Basic and Macromedia Director. My hope is to create several interactive, multimedia CDs, which we can then network. One particular project that I plan to sink my teeth into is the creation of a regional census CD, utilizing an intuitive menu with data extracted from several depository CDs. The possibilities are indeed endless.

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2. <http://www.mnsfld.edu/depts/lib/index.html>
3. <http://www.mnsfld.edu/depts/lib/stats.html>
4. <http://www.mnsfld.edu/depts/lib/pa-districts.html>
5. <http://www.mnsfld.edu/depts/lib/mythomas.html>
6. <http://www.mnsfld.edu/depts/lib/fedregs.html>
7. <http://www.mnsfld.edu/depts/lib/govstats.html>

You might also see the Govdocs pages, at:

<http://www.clark.net/pub/lschank/web/gov.html>

<http://www.clark.net/pub/lschank/web/govdoc.html>

What Wicked Web Will We Weave?

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The World Wide Web is an important development in the evolution of the Internet. With the Web, we finally get a glimpse of the possibilities of the National Information Infrastructure (NII). The Web incorporates easy-to-use graphics and limited commands to navigate through the wealth of online information. Based upon Windows technology, the Web facilitates multiple applications so that users can use a word processor and navigate the Web at the same time. The Web is more dynamic and incorporates URL linkages to pull together similar topics. In libraries, we do not need to provide intense instruction since users can easily learn the basics of navigating the Web.

Perhaps the most important aspect of the Web is that it has propelled the Internet into our business and everyday activities unlike any other aspect of Internet technology. It is impossible to ignore URL listings in advertisements and in popular culture as the Web has truly weaved its way into our everyday lives.

For all of the benefits and wonders of the Web, there still remains much developmental work. Despite the impression that the Web is an integral part of our lives, according to a recent Nielsen Survey, only 8% of the U.S. and Canadian population have access to the Web.¹ Knowing that this percentage has probably increased since the survey was taken in 1995, it is still dangerous to think that we are developing technology and services for a small, elite portion of the U.S. population. To truly be effective, the Web and the developing NII must reach greater portions of our population.

The Web is limited in that it requires high end equipment to run. Users must have sophisticated online accounts in addition to possessing the technical skills to manage the software on their own personal computers. There are also limitations on the structure of the Internet. We can all attest to incidents of busy sites or slow responses during peak periods of use on the Internet. The technology is stressed due to the increase of users on the Internet. "The same tools and applications that are expanding the enabling character of the Internet and attracting new users are pushing the network beyond the bounds of its current architecture."² The success of the Web is limiting its own capabilities. Despite the advancements of the Web, essentially the Web is a graphical interface to ftp or file transfer protocol. The current Internet software and architecture need to be drastically revised in order to meet the demands of users.

I see five areas which need to be developed in order to fully realize the promises of the Web. These are infrastructure, conduits, software, content, and attitude.

1. INFRASTRUCTURE

Bandwidth

Currently, there is a lack of priority or sectioning of the Internet. For instance, your E-mail to a friend about Friday night plans competes for bandwidth space with a doctor who is sending graphical images of x-rays to another doctor. One solution would be to increase the bandwidth. Unfortunately, traffic on the Internet will increase accordingly. Our

current highway system is an example of this scenario. As traffic increases on highways, we need to expand the number of lanes. However, expanded lanes draw more traffic and the traffic increases to the capacity of the highway. Increased bandwidth would solve slow response time. However, this would only be a temporary solution.

HOV Lanes

One solution to the increased traffic is the development of priority routing through the Internet. Similar to High Occupancy Vehicle (HOV) lanes on highways, regular traffic would flow along at a steady pace while high priority traffic would move along faster lanes with less traffic. This would permit those applications, such as video and interactive applications, which need faster and more bandwidth to travel according to their needs while ordinary traffic, such as E-mail and ASCII texts which require less bandwidth, would travel along normal lanes.

Another option would be to establish a system in which certain applications which need high capacity bandwidth can reserve the bandwidth for a certain period of time for that specific application. Packet assembling is currently being studied as well. Before information is transmitted along the Internet, the application is split into a series of packets which reassemble themselves when they arrive at their destination. With graphics and video, it is essential that the packets be reassembled in the correct order.

As we improve the quality of the bandwidth, we can be assured that the traffic on the Internet or the NII will be stable and reliable. Currently, the National Science Foundation in cooperation with MCI is developing priority and high capacity bandwidth which would run within the existing Internet infrastructure. Applications with Supercomputer centers are currently being tested.

Rural Networks

In order for the NII to truly reach all Americans, the infrastructure needs to expand beyond universities, governments, and selected commercial companies. The NII holds the greatest potential for rural communities since it facilitates interaction between individuals and transmits timely and relevant information. Networks must reach every community and neighborhood before the NII can become a viable information resource. It is likely that the infrastructure will be built through cooperative ventures. The government cannot afford to build the infrastructure, yet the commercial sector must see the profit beyond the social good before it heavily invests into building the NII. It is likely that the NII will be a cooperative venture between the public and private sectors working within local communities to build the NII.

2. CONDUIT TO HOMES AND OFFICES

This is closely tied to infrastructure but is more specific to the connections from the network to your home and the hardware necessary to access the Internet or its successor. Once the infrastructure is built, we need stable and simple connections to our homes. SLIP/PPP technology needs to be easier to install and more reliable. However, PPP connections will probably be surpassed by the development of direct connections to the NII.

There are several types of direct connectivity including ATM (Asynchronous Transfer Mode), ADSL (Asynchronous Digital Subscriber Lines) and cable modems which operate on cable television wiring. Perhaps the most popular is the development of ISDN (Integrated Services Digital Network) which is available in some major metropolitan markets. Yet at this time, direct connections are costly, unstable, and do not reach every community.

MCI and AT&T are working on the development of direct connections to offices and homes through telephone cables. Cable television is also pursuing direct connectivity through existing cable television wiring. I do not think it will be long before we are able to directly connect to an Internet Service Provider (ISP) without going through a modem connection. The driving force behind direct connectivity will be the business profits seen in providing entertainment options to the consumer.

3. SOFTWARE AND TOOLS

The Web is a great tool and advances the development of the Internet. However, we need an even more seamless interface with graphics across protocols, and advanced applications such as videos and interactive technologies. Currently, the browser, in cooperation with the Windows interface, looks for the application on your computer to handle unique file formats. For instance, with JPEG files, the browser will call up Adobe Acrobat or whichever viewer you have in order to view the image. However, if you do not have the appropriate application, then you must save the file but can not view it at that moment. The other problem is that each individual must maintain the most current version of various application software on their PC's. The Web is high maintenance at this stage and we need to develop software which requires automatic maintenance.

Java is important in this development. Java will find the most recent version of the application software and run the software on your PC and then return the software to the host computer. This provides for a more seamless interface and reduces the burden of the user to have all of the latest versions of application software. "Some well-known computer scientists even argue that Java, or a language very much like it, will eventually transform the computer industry by turning networks into a new technology platform - supplanting both the personal computer and PC operating system software as the foundation for a new market and new

businesses that will grow as quickly as the PC software industry once did."³ Java or "java like" applications have the potential to radically change how we use software applications.

The development of indexers has facilitated searching on the Internet. GovBot, the forthcoming Pathway Indexer, Yahoo!, and Open Text are excellent tools but limited in their capability. Relevancy ranking is problematic since it is the interpretation of a computer, not human expertise.

One of the contributing factors to the success of the Web has been the relatively easy coding language HTML (HyperText Markup Language). HTML is easy to learn and facilitates the development of Web applications for small companies and institutions since it does not require expensive programming to implement. Javascript is more difficult to learn and requires advanced skills to implement. We need to continue to develop software and computer coding or languages which empower the individual and smaller companies in developing their own applications on the Internet.

Another development is "forms software" which integrates Web technology to existing computer systems. This goes beyond a form on the Internet to taking the information submitted via a form and converting that information into another application. For example, depository libraries could submit their item selection on a form and computer programming would convert the form information to a computer which controls the selection. The lighted bin system would be automatically updated and the new selection would begin immediately. Human intervention would not be necessary since this function is completely automated. Form software technology goes beyond a simple submission of data to integration of data with existing systems.

Collaborative software, especially available on Internet and Intranets, is currently being developed. This includes sharing of

documents simultaneously and the ability to provide instant feedback within a group process. Collaborative software facilitates virtual workplace environments which promote telecommuting and the utilization of experts located throughout the world. Work is not limited by geography or physical space. Collaborative software goes beyond E-mail and fax technology to fully integrated work processes and collaborative working environments available through Internet technology. The Federal Webmasters Consortium is developing work in this area in cooperation with NCSA.⁴

One of the major problems of the Internet is the instability of file locations. Files are moved or Web sites are reorganized which makes it difficult for users to locate a file after it has been moved. Although Webmasters are sensitive to this problem, the difficulties continue to persist. Under development is the idea of Uniform Resource Identifiers (URI) or handles. Another terminology is "persistent URLs" or "PURLs". Regardless of the name, the idea is that a file would have a single URI which would point to the correct location of the file regardless of where the file is located. This idea also works for E-mail, so that regardless of your institution or geographical location, your E-mail would be a unique identifier and you would never worry about new E-mail addresses when you change institutions or Internet service providers.

As depository librarians, we have all experienced patrons who need authentication that the government publication which they are photocopying is a legitimate and authoritative copy of the original. This issue is further complicated in the electronic environment. How can we ensure that the electronic copy is as authoritative as the print copy? How can we authenticate a signature on a document? The development of authentication tools is critical. "Digital signatures are needed for electronic commerce and official communication so that electronic transactions can be done with as much confidence as a signed paper contract or document."⁵ Authentication software is based

upon the "safety deposit key" analogy. In order to authenticate a document, you need two "keys", one from the originator and one from the receiver. When the keys match, then the user can be assured that the document is official from its government entity. The U.S. Postal Service is working toward developing standards for authentication of documents and signatures.

Closely related to authentication is encryption. Now you might recall the dreaded "v-chip" or call up images of spies, but encryption has valid uses for all of us. Encryption ensures secure transactions by using mathematical formulas to change the original message into garbage and then translates the message once it is received by the correct recipient. There is the false perception that encryption creates closed communication but the opposite is true. If we have confidence that our activities on the Internet are secure, we will have more open communication and transfers of information. Encryption is critical if we use the Internet for business applications, especially in sales. Individuals will be more comfortable in placing online orders if they are ensured that their transaction is secure. Encryption will have a positive impact upon electronic applications by facilitating more interactive services.

As we move into the electronic era, we have discussed changing from a "just in case" to a "just in time" scenario. With the advancement of technology, we no longer need to collect all of the information in the world but we need to be able to connect to specific information in the world when we need it. Now we are moving to a "just for you" environment. Technology not only needs to connect us to information, but to that specific information which we need for a specific application. Also, software needs to locate relevant information regardless of the format. For instance, if you were doing research on document collections in public libraries, search software would locate not just the articles you need but would locate the paragraphs within articles and chapters within books along with any graphics you need for

your research. Another example: NBC is testing an application called "HyperMedia" which permits affiliates to pick and choose which videos they need for a local broadcast. Affiliates no longer need to download the entire video archive for the small percentage of video they will actually use. Affiliates only download specific files relevant to their needs.⁶ You already apply this principle when you "channel surf" through programs on television. For instance, you watch the first 15 minutes of a news program and then move on to a sitcom. If you do not care for a particular story, then you switch channels to another newscast. This same principle is being applied to software so that you not only locate information, but you locate specific information tailored to your particular needs.

4. CONTENT

This is dependent upon the first three needs of the Internet. The Web is limited in significant content primarily due to the instability of the structure and lack of authentication. Once the structure is constructed, we need to build the content of the World Wide Web. It needs to be more than advertising and promotional materials to information which is being requested by individuals.

The strength of the Internet has been the idea of the "information commons." Anyone and any group can interact through the Internet. The Internet has supported minority opinions and has promoted the free exchange of ideas. "While entrepreneurs rush to build Web sites and Web products, content remains thin. Some of the richest aspects of American culture have come from its minorities and outcasts."⁷ We need to protect the information commons concept and fulfill the empty promises of television and cable TV.

5. ATTITUDE

I personally believe that as individuals we need to put an end to technology controlling us and turn it around to us using technology to do our jobs better. I will give you a simple example which I think illustrates what I mean.

When you are using E-mail, do you respond to each new incoming message when it is sent? Do you feel pressured that you must respond to that E-mail immediately or to the latest posting on GOVDOC-L? Or do you use your E-mail to control your communications and set aside time in your daily routine to check and respond to E-mail? We need to stop viewing technology as a threat and develop procedures and services which utilize the best of technology. The "Internet Goddess" at UNLV, Kay Tuma, often asks this question in her training "Are you doing your job differently today because of technology or are you doing the same job just with a computer?" If your personal computer is a glorified typewriter and messaging center, then you are not tapping the potential of technology to do your job better and provide effective services. We need to use technology as a tool. A positive, objective viewpoint will assist in the development of tools which we need in order to bring about the full vision of the World Wide Web.

And finally a note of encouragement. Throughout the last two days of the conference, we have been discussing many problems in making the transition to an electronic environment. These problems are not limited to GPO and the Federal Depository Library Program. Bibliographic control, persistent URLs, locators, and search engines are issues which are being considered throughout the Internet community. The World Wide Web is just one more step in the evolution of the Internet. What are we going to do with it? How will it improve our lives? Can it improve our lives? What is its value? "New technologies do not mature and take hold overnight, let alone change our culture . . . If we want a fundamental change for the better in human relations, it will take more than the presence of a new technology to do it."⁸ I am confident in the future developments of the Web and that we can build an infrastructure which supports our current information needs. It is up to us to determine how to use this new tool within our society and I hope we make the correct decisions.

1. CommerceNet/Nielsen Internet Demographic Survey, Executive Summary, New York: CommerceNet Consortium/Nielsen Media Research, 1995, sec.3.2.8

http://www.commerce.net/information/surveys/exec_sum.html

2. Brian Kahin and James Keller, eds. Public Access to the Internet, Cambridge, MA: MIT Press, 1995, p. 45.

3. John Markoff, "Making the PC Come Alive: A Software Language that Puts You in the Picture," *New York Times*, September 25, 1995, p. C1.

4. <http://skydive.ncsa.uiuc.edu/>

5. Alan Sherwood, "Digital Law Inked Signature," *Government Technology*, 9 (February 1996), p.19.

6. "NBC to Test MCI's Fast Video Service," *Information Week*, (April 22, 1995), p. 28.

7. Joel Dreyfuss, "Not as Hip as You Thought: Lack of Diversity Restricts the IT Business and Deprives us of New Ideas," *Information Week*, (April 22, 1995), p. 132.

8. Dennis F. Galletta. "Doomed to Disappointment: Our Expectations of the Internet are Well Beyond What the Technology Can Now Deliver," *Washington Post*, February 16, 1996, p. A21.

Dissemination of Energy Information: An Overview of the Energy Information Administration Electronic Dissemination Program

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Washington, DC

Goals of the Energy Information Administration (EIA) Electronic Dissemination Program

- Maximize the use and ease of use of EIA data and analysis products.
- Minimize the cost to both the taxpayer and user.
- Use newer electronic technologies to reduce cost and improve usefulness.

Strategies

These objectives will be achieved by using the following strategy:

- Use appropriate technologies such as the Web, FTP, listserv, etc., to disseminate information to a wide variety of technologically diverse users.
- Move away from the old publication paradigm which was to write out by hand, type, print, mail, and answer the phone, to a new paradigm.
- The new paradigm consists of type (as little as possible), publish electronically in a variety of formats, and customize products to specific user needs.

Dissemination Technologies

Specific dissemination technologies and their advantages consist of:

- Internet servers where distribution is almost instantaneous; there exists a client base of between 5 and 25 million people that is growing rapidly; marginal production costs are fairly low.
- Data applications server meets specific customer needs while minimizing their costs. This technology does not require the downloading and installation of large software packages.
- Compact disc, which holds a large volume of data, is easy to search and use the results in other products, has very low marginal costs when compared to paper and reaches a fairly broad customer group. Libraries are very enthusiastic because of the shelf space that is saved as well as the ease of using the search engine.
- Listserv (e-mail) has a very low marginal cost, provides interested readers with short reports very quickly, allows only those customers who are interested to belong.

- Dialup server allows users without an Internet connection to retrieve files from our FTP server.
- Fax on demand requires only a fax machine for those users without other forms of electronic access.
- Broadcast fax is the equivalent of the listserve but for those users with a fax connection.

Results

Experience to date has shown:

- Very rapid growth in the use of the Web site, averaging about 25 percent per month between July, 1995 (when the site first opened) through February, 1996. The EIA Web site averaged about 11,000 unique daily users per month in February.
- A decline in the use of the existing dialup (call EPUB) service that has been in place for several years.
- In a period of just 6 weeks use of the listserv has increased from nothing to about 1,000 users.
- A recent survey of phone-in customers has shown that almost 50 percent prefer or find acceptable the electronic products as opposed to the paper publications.
- About 800 libraries and private individuals have ordered the compact disc. Private sales have started slowly but are expected to build.

U.S. Geological Survey Earth Science Information in the Electronic Information Age

David L. Govoni
U.S. Geological Survey
Reston, VA

U.S. Geological Survey Primary World Wide Web Entry Points

U.S. Department of the Interior Server
<http://www.usgs.gov/doi/>

U.S. Geological Survey Server
<http://www.usgs.gov/>

- USGS National Mapping Information Server
<http://www-nmd.usgs.gov/>
- USGS National Water Information Server
<http://h2o.usgs.gov/>
- USGS National Geological Information Server
<http://geology.usgs.gov/>

USGS Node - National Spatial Data Infrastructure (NSDI) Server
<http://nsdi.usgs.gov/>

Earth Science Information Center (ESIC) Server
<http://www-nmd.usgs.gov/esic/>

Federal Geographic Data Committee (FGDC) Server
<http://fgdc.er.usgs.gov/>

USGS Mapping Centers

EROS Data Center (EDC)
Sioux Falls, South Dakota

Mapping Applications Center (MAC)
Reston, Virginia

Mid-Continent Mapping Center (MCMC)
Rolla, Missouri

Rocky Mountain Mapping Center (RMMC)
Denver, Colorado

Western Mapping Center (WMC)
Menlo Park, California

TRADITIONAL CUSTOMER VIEW + TRADITIONAL TECHNOLOGY = FEW OPPORTUNITIES

USGS traditionally a provider of technical information to technical professionals:

- Tailored to a relatively small pool of academic, government, and commercial consumers;
- Information dissemination primarily through professional journals and presentations;

- General public's interaction with USGS mainly through sale of printed topographic maps.

Past available technologies were not suited to wide, rapid diffusion of Earth Science data and information:

- Large, complex data sets were stored in a multitude of formats;
- Many data base systems were mainframe-based;
- Delivery of digital data complicated, time-consuming, labor intensive.

Limited visibility in the public eye, limited public access, resulted in limited opportunities for promoting new or better information products and services.

TRADITIONAL EARTH SCIENCE DATA + NEW TECHNOLOGY = NEW OPPORTUNITIES

Trend in information technology toward proliferation of powerful, "multimedia" personal computers:

- New tools provide consumers with means of accessing large amounts of data and information quickly and affordably;
- Modems and inexpensive client software provide a relatively simple way to link to the rich multimedia resources of the Internet World Wide Web;
- CD-ROM's provide a very cost-effective mechanism for delivering very large volumes of data and information;
- USGS data are online and near-line in distributed servers.

Many new customers can "visit" the USGS, locate desired information, and directly download, or place orders for, data products:

- Web of tightly interwoven general, subject-specific, or data product-oriented home pages;
- Earth Science Information Center "virtual store fronts."

New Customers Bring New Needs, Views, and Uses for Our Information Products and Services

New technology allows us to meet changing customer demands quickly, efficiently, and innovatively:

Adding value to existing information products:

- National Water Conditions;
- Geographic Names Information System.

Creating new products and services:

- Colorado Real Time Water Data;
- Digital Raster Graphics (DRGs).

Serving the public through more effective delivery of information and knowledge:

- USGS Node - National Geospatial Data Clearinghouse;
- Cascades Volcano Observatory;
- Learning Web.

The Challenge—Building Multiple Pathways to USGS Data and Information To Serve a Diverse Customer Base

Continue to serve traditional, mainly technical, customer base:

- Academic, scientific, and general technical communities;
- Commercial sector customers;

- Other Federal agencies, State, and local government consumers;
- Public and private sector cooperators (data acquisition and sharing);
- Disaster preparedness and relief organizations;
- Depository libraries.

Address needs, interests, and capabilities of new, growing, often non-technical, customer base:

- Recreational users of maps, water information, and other products;
- Hobbyists and general researchers (e.g., genealogists and historians);
- Educators and citizens of all ages interested in learning more about Earth Science;
- Technology Transfer partners.

Current and Planned Activities

Move aggressively into electronic publishing and print-on-demand:

- Move to "electronic first" publication policy while retaining multiple format delivery capability;
- Standardize publication formats (HTML, Adobe PDF) and delivery modes (Internet, CD-ROM);
- Develop stable media electronic publications and digital data archives (CD-ROM).

Coordinate, integrate, and improve Bureau-wide Web data and information dissemination efforts:

- Deploy graphical spatial query and image browse interface to USGS geospatial data product catalogs;
- WebGLIS - Web-based version of the Global Land Information System;
- Develop content metadata standards for USGS products to facilitate organization and discovery.

Expand and ease Internet access to additional Earth Science data and information products:

- USGS Node, NSDI Geospatial Data Clearinghouse;
- Digital Geospatial Data products, in SDTS format, via Anonymous FTP without charge;
- Direct query access to selected databases (e.g., GNIS);
- Online ordering and secure credit card payment for USGS products.

National Center for Health Statistics: Electronic Information Dissemination

June Gable

National Center for Health Statistics
Hyattsville, MD

The National Center for Health Statistics (NCHS) collects and disseminates statistics on health status, use of health care resources and vital statistics. In addition to distributing paper copies of reports, we have been putting our publications on our Internet home page for about a year and a half. The files, in .PDF format, are added to the home page when the publications go to the printer. That means that you may be able to print a copy of one of our reports from the Internet before any paper copies have been printed. I will be showing you the features of our home page in a moment. You'll find flyers with the URL address in the back of the room <<http://www.cdc.gov/nchswww/nchshome.htm>>. The .PDF files need to be viewed with Adobe Acrobat software. There is a link to the free Reader on our home page. Many of you will already have Acrobat installed on your library computers. There are several CD-ROMs that have been distributed through the Depository Library Program that use that software.

Our Advance Data, Monthly Vital Statistics Reports, Vital and Health Statistics Series, and most miscellaneous reports can be searched and printed over the Internet. We do not have the Vital Statistics of the United States in electronic format yet, nor have we started to convert the older reports. The latest publications are found under What's New. The icons underneath the titles evoke the Acrobat Reader you have installed on your computer and display the full text of the publications.

[Demonstration of NCHS home page: viewing information about the data collection systems, searching for a word in a publication, reviewing the list of electronic products, using the query button to ask a question.]

We get about 30 requests per day through the query feature. If you need copies of our reports, or have a question about the data, this is a good avenue for you to use. We try to respond within 24 hours. Detailed questions about the data may take a little longer.

Many of you are familiar with our CD-ROMs, both the data CD-ROMs and the publications CD-ROM. We issued our first CD-ROM with copies of our reports, including some of the Vital and Health Statistics Series, the Rainbow Series, as .PDF files, last year. The disc features Health, United States, 1994. We will be issuing another publications CD-ROM, when Health, United States, 1995 is released this summer. The disc will also include other publications issued since the first CD-ROM was produced.

We've published some new data CD-ROMs recently. Someone asked me why the Center publishes the microdata on CD-ROM instead of just publishing all of the reports on CD-ROM. The answer is the data sets are the source of the information published in the reports and they can be analyzed in many different ways. The Center does analyses to produce reports on the most important and most sought after aspects of the data. The microdata is distributed on CD-ROM and

magnetic tape for researchers to analyze other aspects of the data.

These data sets on magnetic tape are described in depth in the catalog of electronic products. Only a small number of the data sets are also available on CD-ROM. The data CD-ROMs in your libraries represent some of the data sets that were used to produce the published reports from NCHS. The catalog of electronic products can be a useful reference tool. Related reports are listed for each of the data collection systems. This catalog is accessible through our home page, or we can send you a paper copy. A searchable electronic version of the electronic products catalog, on diskette, for use with Windows, is also available without cost from NCHS.

We now have about 20 data CD-ROMs, which also contain the documentation necessary to use and analyze the microdata, and software to manipulate the data. The software, the Statistical Export and Tabulation System (SETS), allows the user to search and print the documentation, create two-way tables, create tables with rates, and export subsets to use with statistical software, such as SAS. I do have a tutorial on disk, in .PDF format, that walks you through the functions of the SETS software and makes suggestions about use of the NCHS data CD-ROMs in a library setting. If you would like a copy, ask for the Joy of SETS, either through the Internet query or over the telephone. There are bookmarks in the back of the room that have the telephone number on them (301-436-8500). Please let us know if you will also need a disk with the Acrobat software to read the .PDF file. We can send both to you without charge.

There is also a list of our CD-ROMs in the back of the room. The 1993 National Health Interview Survey on CD-ROM has just been published, and we expect the 1991 Multiple Cause-of-Death CD-ROM in the near future.

We have very few diskettes. Two that might be of interest to you are the tables from Health, United States, 1994, in spreadsheet format and tables from the Trends in the Health of Older Americans, 1994 (Series 3 no. 30) in spreadsheet format. Another electronic product, that we expect to have ready this summer, is a catalog of publications issued from 1962 through 1994. We think the catalog will be on diskette rather than CD-ROM. It will be searchable with Acrobat and will include the authors' names and the dates of the publications. We expect to distribute it without cost.

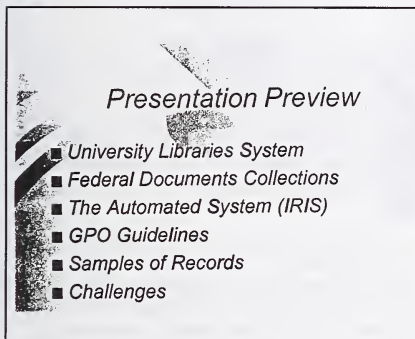
Government Documents Check-in in an Electronic Environment

Jerry Frobom

University of Nebraska - Lincoln
Lincoln, NE

I am pleased to be here to describe to you today the process that the University of Nebraska-Lincoln Libraries System has undertaken during the past 3 1/2 years to integrate the Federal Government Documents collection into the regular collections within the Library system.

Slide 1

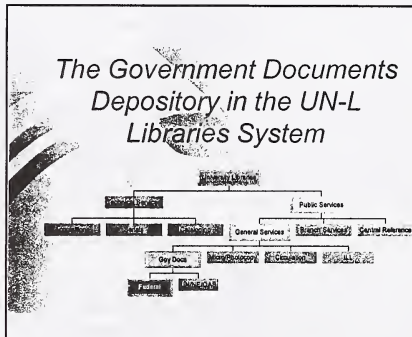


I will first describe the Libraries System and the Federal Documents collections in it, the elements of our automated system and how we interpreted the GPO Guidelines regarding our situation, I will then show you some examples of how documents records appear in our data base, and conclude with a discussion of some of the challenges we still need to resolve before we can call the project complete.

I would ask that you save your questions until after the end of the presentation. I am sure that we will have ample time to answer any questions you may have, and feel free to

make comments about our program at that time.

Slide 2



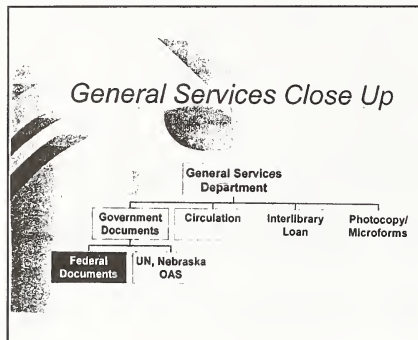
The Documents Depository is a unit within the General Services Department, one of 3 Departments on the "Public Services" element of the Libraries System. With a recent reorganization taking place, all Department Chairs now report directly to the Dean of Libraries. The organizational chart here will give an idea of our structure. However, there are some support staff units, such as the Automated Systems Office, and the Collections Development Office which are not on the chart.

The General Services Department has 4 units: Photocopy/Microforms Services, Interlibrary Loan, Circulation, and the Government Documents Depository.

The Documents Depository has two elements: the Federal Depository, and the United

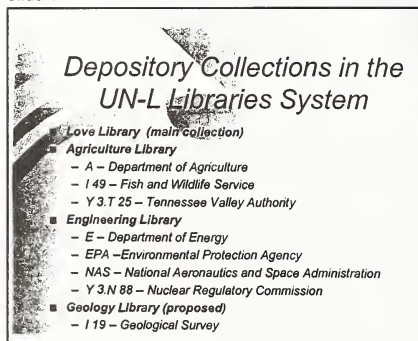
Nations, Nebraska publications, and OAS collections.

Slide 3



The unit is staffed by one professional librarian, a library specialist who is a paraprofessional (also my computer expert), 2 clerical library assistant II's for the Federal Program, and a .5 library assistant II for the UN/NEB/OAS collections.

Slide 4

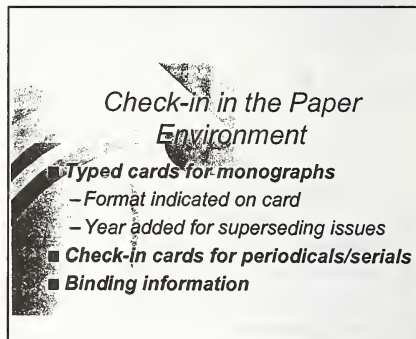


The University of Nebraska is the designated land-grant university for Nebraska and is the primary research institution in the State. The enrollment is about 25,000, and we are divided into two campuses: the City (or Main) Campus, and the Agricultural Campus, or East Campus, which is about 2.5 miles away.

The University Libraries System consists of Love Library which is the main library, plus 9 branch libraries. Love Library houses the main documents collection and the unit offices. The largest branch docs collection at this point is in the Agriculture Library on East Campus, and we also have a substantial docs collection in the Engineering Library on City Campus. The Law Library, which is on East Campus, is a separate entity, although its holdings appear in the University Libraries data base.

We also are going to be developing a docs collection in the Geology branch, which is on City Campus.

Slide 5



Prior to automation, the Federal documents collection was handled in a rather traditional way. We had a paper shelf-list arranged in SuDocs order with typed shelf-list cards for the monographs, and check-in cards of several types for checking in periodicals and serials. Also included in the shelf list were cards giving binding information, such as cover color, the number of issues per binding unit, and cover title. Much of the information for the current periodicals and serials, such as holdings, issue dates, and binding information has been transferred to our check-in records, which I will discuss in a few minutes.

Also included on the paper check-in cards was format information, such as microfiche holdings, and we used the same monographs

to indicate dates of superseding issues for irregularly issued items.

The University Libraries has 4 major elements in our automated Innovative Interfaces (III) system, which we refer to as IRIS.

Slide 6

Elements of the Electronic Environment

- **The Data Base**
 - Government Documents integrated into database
- **Public Access Catalog**
 - Government Documents displays identical to other materials - seamless
- **Circulation**
 - Government Documents circulate from main library and branches
- **Serials Check-in**
 - Check-in for periodicals and serials
 - Binding process same library-wide

First, for our discussion, the data base includes MARC bibliographic records, item level records, serials check-in records and on-line check-in cards, patron records, and a variety of tables which serve to connect all these elements together, depending upon the function requested.

The Federal documents which have MARC records (after 1976), are now incorporated into our database and displayed on our on-line Public Access Catalog or PAC, along with the rest of the libraries' holdings.

We use the circulation module of the system to circulate practically all of our documents.

We use the serials module of the system to check-in the periodicals and serials we receive, combined with the binding module which we use in conjunction with the binding unit of the libraries to bind our materials.

The IRIS data base consists of three elements:

The main element of the database is the MARC bibliographic record, which provides a description of each title in our collection. We

have both monographic and serial records for the documents in our collection.

Attached to the bibliographic record is an item level record, which contains coded information on a piece-level basis for each individual monograph, or bound periodical volume. For current periodicals and serials, a check-in record is also attached at this level, which provides holdings information, vendor and binding information, and a on-line check-in card for checking in current issues.

Slide 7

The Innovative Interfaces (III) System

- **Bibliographic record**
 - Monographic record
 - Serials record
- **Item level record**
 - attached to bibliographic record
 - piece-level information for monographs
- **Check-in record**
 - extensive information included for serials
 - check-in record attached for current serials/periodicals
- **Order record**
 - Created for report creation purposes

An order level record is created for each document serial so that we can use the report function of our system to give us a title count of the current serials and periodicals being received.

Slide 8

Creating the Gov Docs Database (Retrospective)

- **GPO Tape Load Committee Formed (1992)**
 - Membership included both Technical Services as well as Public Services staff
 - Examination of current work flow
 - Recommendation to use Marcive (October 1992)
- **Retrospective tape load**
 - Began January 1993
 - 280,000 total records
 - loaded serial records first
 - item level records with default locations attached
 - map records still suppressed

Early in 1992, a GPO Tape Load Committee was created, which included staff members from both the Technical Services Departments and Public Services Departments of the University Libraries and the University Law Libraries. Cooperation between the two libraries and all the departments involved has been critical from the very beginning of the project. That cooperation still continues, as tech services units assist in the creation of check-in records for docs serials, and docs staff members regularly attend tech services units meetings to facilitate communication between all units involved.

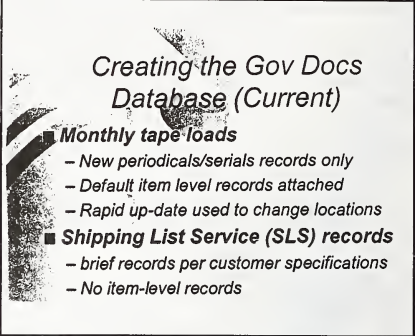
The committee was charged to examine the desirability and feasibility of making a transition by the docs staff from the current paper check-in to a completely electronic on-line system.

After several months of meetings, and an exhaustive examination of workflows, the committee determined that the transition was feasible, and recommended that Marcive, Inc. of San Antonio be the provider of the necessary MARC records. Marcive had provided the records and processing for the existing data base, so we had a track record to judge performance. They were also very familiar with our existing system.

The tape load was made in several parts. We began the full retrospective tape load of 280,000 records in January 1993. Because of the size of the files, the file was broken into 10 sections. Beginning with the serials, the entire process for loading the retrospective files took about 16 months. Because decisions regarding the map records have yet to be finalized, the 12,000 map records remain suppressed.

Loading the monthly GPO MARC records began February, 1993, loading concurrently with the retrospective tape load. Part of the processing is running the item level records through the rapid-up-date capabilities of IRIS to change location codes, determined by the SuDocs stem number.

Slide 9



Creating the Gov Docs Database (Current)

- **Monthly tape loads**
 - New periodicals/serials records only
 - Default item level records attached
 - Rapid up-date used to change locations
- **Shipping List Service (SLS) records**
 - brief records per customer specifications
 - No item-level records

In order to take advantage of the serials check-in system, check-in records began to be created in the spring of 1993, with 400 check-in records completed by June 30, 1993. 700 more check-in records had been created a year later, and by June 30, 1995, we had 3,900 check-in records.

For the first 21 months of the transition, we maintained our paper shelf-list, except for the serials which we were checking in, using the serials module of IRIS. However, we were becoming more and more aware of the time lag between the receipt of monographs and the availability of MARC records.

In order to bridge the gap, we began subscribing to Marcive's Shipping List Service (SLS) records, which provide an on-line record within 7-10 days of receiving the materials. On October 1, 1994, we officially closed out the paper shelf list, having elected to use the on-line SLS records to indicate receipt of materials.

Underlying all our discussions regarding feasibility and examination of work flows was the issue of GPO requirements for piece-level records for materials received through the Federal Depository Library Program.

Slide 10

Meeting GPO Minimum Guidelines

- **Item level records for monographs**
 - Separate item record for microfiche (dual depository items)
 - Item level record for each individual volume/part (hearings, etc.)
- **Summary holding records for serials**
 - Used to list bound volumes
 - Can be used to indicate lacking or missing pieces
- **Check-in records for items being currently received**
 - Date of receipt, number received
 - Volume/issue or date of issue
 - Expected date for next issue/edition
 - Used as basis for claiming

We decided that although we were not going to use separate bibliographic records for materials received in paper and fiche, we would create item level records for each individual piece. So for dual distribution items, we have one item level record for the paper piece, and a second item level record for the fiche. At the recommendation of our Public Service librarians, we also create a separate item level record for each piece of multi-part monographs, such as hearings.

Our serial records include a summary holdings statement indicating what we have received. We use these to list items received and bound, and also indicate missing or lacking pieces. We use the check-in record to record items being currently received, and when a volume is bound, we change the summary holdings statement to up-date it.

We probably have better records now than we have ever had, since we often go directly to the shelf and conduct an inventory before creating holdings statements.

I will admit, however, that we do not have a perfect system, and we do have a few serials records which have the statement "Check shelf for availability," indicating that we do not have piece-level records for these items.

Our initial record for a monograph is the Shipping List Service record we purchase from Marcive. This is the way the record appears

on our PAC.

Slide 11

Shipping List Service (SLS) Record (Marcive)

TITLE 104-1 Hearing: Next Generation Weather Radar (NEXRAD): Are We Covered?, [No. 25]

AUTHOR United States. Congress. House. Committee on Science and Technology.

DOC NO 1025-A-01.

Y 4.SCI 2:10425.

NOTE

* THIS IS ONLY A TEMPORARY RECORD!
 * FOR CALL NUMBER, SEE "DOC NO." ABOVE.
 * FOR LOCATION, CONSULT "STACKS DIRECTORY."
 * FOR LAW LOCATION, CONSULT "WALKING TOUR GUIDE."

You will note that the information is minimal - there is no indication of availability that you will see on the full MARC PAC record. Additional information such as the shipping list number is suppressed in the public mode.

This record will be overlaid by the full MARC record including an item level record when we receive it via the monthly tape load. Marcive includes an accession number on each of its SLS records, and then includes that same number in the MARC record, so IRIS is able to match and overlay. If an item level record has been attached to the SLS, such as would occur had the piece circulated, that item level record will transfer to the new MARC record.

Initially, we loaded the SLS records and immediately suppressed them, unsuppressing them as part of our check-in procedure to indicate that we had received the item. However, we now load them unsuppressed, and only suppress them if we have not received a piece, along with a note indicating when an item has been claimed.

We were also concerned with quality control, but we found that the quality of the Marcive records did not justify examining each and every record.

Slide 12

Monographic Record in PAC

TITLE Is today's emergency policy preparing us for the future? : hearing before the Committee on Science, U.S. House of Representatives, One Hundred Fourth Congress, first session, January 6, 1995.

AUTHOR United States. Congress. House. Committee on Science.

DOC NO 1025-A-01.
1025-A-02 (MF)
Y 4.SCI 2:104/1.

PUBLISHER Washington : U.S. G.P.O. : For sale by the U.S. G.P.O., Supt. of Docs., Congressional Sales Office, 1995.

DESCRIPT. Ill, 200 p. : Ill. ; 24 cm.

NOTE Distributed to some depository libraries in microfiche.

LOCATION	CALL NO.	STATUS
> 1 > LOVE USdoc	Y 4.SCI 2:104/1	AVAILABLE
> 2 > LOVE USmfiche	Y 4.SCI 2:104/1	LIB USE ONLY

This what a monograph record looks like in our PAC.

Notice that there are two item-level records for this particular piece—one for the paper issue which is available for circulation—the second is for the fiche edition which is limited to in-library use only.

Our library-wide finding guides direct the patron to the correct location for each item.

Slide 13

Serial Record in PAC

TITLE Census and you : monthly news from the U.S. Bureau of the Census.

AUTHOR United States. Bureau of the Census.

DOC NO 149-C.
C 3.238:

PUBLISHER [Washington, D.C.] : The Bureau : [For sale by G.P.O., 1988-]

DESCRIPT. v. : Ill. ; 28 cm.

FREQUENCY Monthly.

BEGAN WITH Vol. 23, no. 4/5 (Apr.-May 1988).

LOCATION	CALL NO.	STATUS
> 1 > Depository	C3.238: LOVE USdoc	
LIB. HAS:	v.23:no.4/5(1988:Apr-May)-28(1993)-	
Latest received:	January-February 1996 31:1-2	

This is a serial record as it appears to the patron. You will note the item level record includes the holdings statement indicating which pieces are bound, and the second line is created from the on-line check-in card indicating the date of the last piece received.

Slide 14

Creating the Serials/Periodicals Check-in Record

TITLE Census and you : monthly news from the U.S. Bureau of the Census.

AUTHOR United States. Bureau of the Census.

PUBLISHER [Washington, D.C.] : The Bureau : [For sale by G.P.O., 1988-]

CALL # C3.238:

LIB. HAS: v.23:no.4/5(1988:Apr-May)-28(1993)-

10 TYPE: p 06 CLAIMD:06-14-96 06 VENDR: ueggo 10 SCODE4:

09 RECPRG: b 06 LOCATION: lss

11 CALL # C3.238:

12 IDENTITY Depository

13 LIB. HAS: v.23:no.4/5(1988:Apr-May)-28(1993)-

14 NOTE SPECIAL HANDLING REQUIRED

15 NOTE CHECK INFO: STAMP "CURRENT DDCS PERIODICAL FOR LIBRARY USE ONLY"

16 NOTE CHECK INFO: Route to JBF when rec'd

17 NOTE DDCS OFFICE

18 NOTE MISSING 1: v.26/5; v.27/12; v.28/10

19 VEN. NOTE ITEM Number:2149-C. Supt. of Docs:C3.236; LIBRARY 6343

20 CHECK-IN Card: Status is current; 34 boxes, 30 days between issues

21 BIND INFO Bind 24 nos tog(LB:507;Label:3v.-v.1)TYPE:002

22 BIND INFO Semph label: DDCS C3.236: 17-18

23 BIND TITLE U.S. Census Bureau. CENSUS AND YOU

The first part of the check-in record for current holdings is extensive, including much of the information previously included on several cards in our paper shelf-list. The notes indicate the special handling procedures, the vendor note indicates from whom we get the piece, and the binding notes contain the information needed by the binding unit to get the volumes bound.

We are using function keys to create much of this card, but since each title is unique, the creation of this record is quite labor-intensive, and requires a great deal of training to insure uniformity.

And this is only the front half of the check-in record, followed by...

Slide 15

Checking-In Using the New Check-in Records

AUTHOR United States. Bureau of the Census

TITLE Census and you : monthly news from the U.S. Bureau of the Census

CALL # C3.238: LOCATIONS lss

LIB. HAS: v.23:no.4/5(1988:Apr-May)-28(1993)-

Boxes 16 to 28 of 36

Mar 88	Apr 88	May 88	Jun 88	Jul 88	Aug 88	Sep 88
ARRIVED	ARRIVED	ARRIVED	ARRIVED	ARRIVED	ARRIVED	ARRIVED
04-16-88	05-23-88	07-13-88	07-27-88	08-29-88	09-26-88	10-23-88
30:3	1:30:4	1:30:6	1:30:6	1:30:7	1:30:6	1:30:9

Oct 88	Nov-Dec	Jan 89	Feb 89	Mar 89	Apr 89	May 89
ARRIVED	ARRIVED	EXPECTED	E	E	E	E
13-12-88	01-29-89	02-29-89	03-29-89	04-29-89	05-29-89	06-29-89
30:10	1:30:11-12	1:31:1	31:2	31:3	31:4	31:6

...the on-line check-in card.

For current items, this is the record which comes up for library staff members when they search the database to check-in items. The actual check-in can be done with as little as 3 key strokes, but we usually do a lot more, since we like to have the expected date updated to reflect a pre-determined interval based on when we received the last item.

Rather than running a parallel circulation system for government documents, having the documents in the IRIS database enables us to circulate government documents from our regular circulation desk. Remember, to the patron, these pieces don't look different from anything else he or she has selected to check out.

We don't handle over-dues, fines, items held for patrons, or recalls. These are all ably done by our circulation unit.

Slide 16

Circulating Government Documents

- *Circulation unit handles all facets of circulation*
- *All documents circulate under same rules as regular materials*
- *Materials which do not circulate:*
 - *Census Bureau Publications*
 - *Serial Set volumes*
 - *Congressional Record (bound)*
 - *CD-ROMs which are part of Reference Collections*
 - *Microforms*

There are a few pieces which we don't circulate, as seen here. However, we can override the system should a special request be made to check out an item in these categories.

We are circulating some CD's, particularly those for which we have not loaded software into our stand-alone workstation. Those pieces are in storage cases and are on the shelves, interfiled with the regular docs

collection.

Slide 17

Claims and Binding

- *Claiming from shipping lists only*
- *Missing issues from direct mail items*
- *Binding of monographs and serials*
 - *Monographic guidelines library-wide*
 - *Serials bound using same criteria library-wide*

After the docs staff was nearly buried alive by the volume of IRIS-generated claims which were being printed and forwarded to us from the Serials Processing unit, we decided that we would limit our claims to pieces missing from shippings lists, and those items we could identify through the system as pieces missing from direct mail/subscriptions.

Although the docs staff initiates the binding of individual items, all the actual binding is done through the binding unit which is part of the Serials Department. We do bind monographs extensively, but do not strictly follow the library-wide guidelines, mainly because of the enormous numbers of volumes involved. For serials, we use the same criteria we use for the rest of Libraries Systems materials.

There are some series which we have not been able to figure out how to set up a check-in record which would make sense to patrons and/or library staff. These are some of the same "gems" which had shelf list cards which read "send directly to stacks". We are still waiting for the CD version of the POMS manual.

On the other hand, we had originally intended that all SLS records would eventually be eliminated after they had been replaced by the full MARC records. However, there are a

couple of series which have individual titles listed on the shipping list, but have only serials records available. We are probably going to leave the SLS records in the system, since we can search each title by keyword, thus providing some access to them.

Slide 18

Challenges and Unresolved Issues

- **Some items simply unable to record**
 - SSA 1.8/2: Social Security Program Operations Manual (POMS)
- **SLS records only way to search some serials**
 - J 1.102: Executive Office for Immigration Review

We do have a number of loose ends, or to use the local euphemism, "clean-up projects," to finish.

Slide 19

Clean-up Projects

- **Public Laws (provide US Statutes locations)**
- **Serial Set items (indicate Serial Set volume numbers)**
- **Monographs cataloged as serials**
- **Identifying and deleting duplicate records**
- **Holdings for ceased titles**
- **Maps**
- **Odds and ends in branches (LC)**

These are not listed in priority order, but probably the largest project is the "monographs cataloged as serials" entry, since the practice at the University Libraries has been to catalog large series of monographs, such as those received from the Department of Agriculture, Department of Labor, and the Geological Survey as serials, classified for the

LC collections. Now that we have individual monographic records available, we are planning on transferring these pieces from their current LC location to SuDocs classifications into docs collections. These are primarily in branch locations which already have documents collections.

Slide 20

Summary

- **Project well worth the effort**
 - Docs collection integrated into library resources
 - Usage has increased dramatically
 - Serials check-in and binding consistent with other materials
- **Automation has not saved time or staffing**
 - Creation of check-in records is labor-intensive
 - Quality control critical to maintain uniformity of records
- **Library staff needs to be kept abreast of transition**
 - Planning group included wide range of staff
 - Regular announcements of progress of tape loads
 - Many opportunities to ask questions and give recommendations

Taking everything into consideration, the project has definitely been worth while. Our circulation of gov docs has gone up about 150% over all locations. Patrons now have full bibliographic access to both documents monographs and serials, and we have pretty much removed any stigma that patrons sometimes feel about using government documents.

On the other hand, automation has not saved time or staff. The real benefit is on behalf of the users. Eventually, we expect that we will get caught up creating serials check-in record (5,105 at last count). It does take time to maintain high quality in the database. It takes time to train staff in the intricacies of the system and bibliographic records.

As we discussed the feasibility of the project, the rumor mill had a field day. We realized early that staff had to be kept abreast of decisions and developments regarding this major project. As a team, the Docs Tape Load committee held "dog and pony" shows to keep the entire library staff advised as to progress. We benefitted greatly from the

recommendations that staff provided us,
giving us their insights.

The real reward for all the work that has been
put in thus far, however, is the sight of a
faculty member, grad or undergrad, or the
member of the general public heading into
our stacks with a multi-page list of documents
that he expects to find and use.

Automated Check-In of Documents in Regional Depositories with USDOCS, a PC-Based System: University of Idaho Library Experience

Lily Wai
University of Idaho
Moscow, ID

What is USDOCS?

An automated U.S. depository documents check-in system developed by Margaret Mooney at UC Riverside

To be used with a machine readable shipping list service, such as Marcive or Bernan

Can be converted to full MARC format for public online catalog

Can be used with the PC-based GPO tapes extraction system developed by UC Riverside

What can USDOCS do for you?

Automatic checking-in of documents received by depository shipments, direct mail, or non-depository mailing

Shelflisting to the piece level

Reference use for latest acquisitions

Printing call number labels automatically

Automatic claiming and statistical recording

Cutting down processing time by at least 50%

How do you make USDOCS work for your library?

Customizing ITEMS database:

Clean up your own item records by manually entering and changing information according to your own shelflist

Each item record with more than one SuDocs class assigned, a separate record is created for each class

New item and class records can be added anytime

Fill in processing codes in the SERCODE and MONOCODE fields

Sample Records:

SELECTION
LOCAL LOCATION
FORMAT
SERIAL
MONOGRAPH
FREQUENCY
NOTES
BINDING

Item No 0429-J-01
SUDOC E 3.1/2:
SEL S
LOC REF/DOC
CALLNO

AGENCY EPA
 TITLE GEN PUBS
 FMT P/M
 STAT A
 DATE 02/29/96
 SERCODE /B/LO

Customizing USPROC database:

Write your own code to reflect local processing procedures:

- Location codes
- Binding codes
- Processing codes

Examples:

/CD: cd-rom shelved in Reserve Room
 /REF-L: latest ed. shelved in Ref/Doc
 /B: binding according to instructions
 /A2: bind every 2 yrs
 /NDEP: non-depository item

System Requirements

A PC with a 486 or higher processor

dBase software

A printer with good tractor feed of paper from bottom up (if you want to print your own call number labels)

Tape backup unit

Costs

Approximately \$5,000

Start up cost:

Computer station: \$2,000
 USDOCS system: ?
 Printer: \$300-400
 Tape backup unit: \$150
 dBase DOS version: \$160
 (academic discount)

Annual cost:

Annual Shipping List Service: \$995
 (weekly delivery from Bernan)
 Labels: \$340 (20,000 labels)

Samples of USDOCS Menu

USDOCS System

Item Number Database Main Menu
 ITEMS.dbf – Maintenance Menu
 Shipping List Processing Menu
 Automated Shipping List Processing
 Upload Shipping List Files
 Database Maintenance Tasks

USDOCS System – Menu

Reference searching
 Shipping List Processing
 Go to Items.dbf menu
 Quit to DOS

Item Numbers Database Main Menu

1. Find/view records by ITEM NUMBER
2. Find/view records by SUDOC CLASS #
3. Find/view records by TITLE
4. Maintenance Menu
5. Return to USDOCS MENU
0. Quit to DOS

ITEMS.DBF – Maintenance Menu

1. Find/edit records by ITEM NUMBER
2. Find/edit records by SUDOC CLASS NUMBER
3. Find/edit records by Title
4. Edit/Add New Records
5. Build SUDOC - Key if blank
6. Reindex the ITEMS.dbf
7. Dot Prompt
8. Return to ITEMS.dbf Main Menu
9. Return to USDOCS Menu
0. Quit to DOS

Shipping List Processing – Menu

1. Automated Shipping List Processing
2. Check-in Claims/Rainchecks
3. Handle Problem Records
4. Upload Shipping List Files
5. Database Maintenance Tasks
6. Go to USDOCS Main Menu
7. Go to Items.dbf Menu
8. dBase Dot Prompt
0. Exit dBase

Enter the Shipping List number or DM for Direct Mail: _____

(Sample of Shipping List Number: 96-0001-P, 96-0001-M)

Do you want to upload Shipping List records now? (Y/N) _____

Automated Check-in Procedures:

Open boxes, check mark items received on SL, stamp date shipped (mostly done by students)

Make notes on SL for items missing, or corrections needed

Line up shipments on a book truck by SL order

FTP Bernan disk files on a floppy when notified by e-mail and pick up fax copy of Shipment Checklist

Upload Shipping List files to hard drive

Check in by Shipping List numbers, and SuDoc class numbers

Check mistakes in title, call numbers, etc., before mark "Y"

Print labels and put labels on checked in items

Make claims, correct problems for missing item records, or class numbers, etc.

Record statistics

Make notes and sort documents according to SuDoc numbers, and designated locations

Questions?

For further information about USDOCS System, please contact:

Margaret Mooney
Government Publications Dept.
Riverside Library
University of California, Riverside
P. O. Box 5900
Riverside, CA 92517
<mmooney@ucrac1.ucr.edu>

USDOCS in Action: A Demonstration of Margaret Mooney's Electronic Check-In Program

Elizabeth Baur
The University of Memphis
Memphis, TN

When the University of Memphis became the newest regional in 1989, we knew we would be receiving many more documents than we had as a 68% selective. However, we were dismayed when it turned out that the 32% of items that were added doubled our total receipts! Even though we had always selected a large number of items in the past, the record keeping and check-in of everything overwhelmed our experienced and talented staff. After a while it became apparent that we would have to simplify some of our more detailed shelf list records just to keep up.

In addition, we were facing a move to a new library building where we would be more highly visible, thus increasing our reference activity. Since our library assistants also participate in reference service, this would push everyone to overload. And of course, no one really anticipated quite the sudden explosion of electronic material with its attendant learning curve!

In 1993, a staff member attended an ALA pre-conference program and saw Margaret Mooney's USDOCS check-in system. She reported to us that she was extremely impressed with its simplicity and speed. This sounded like the perfect solution for easing our workload, and in addition, allow us to have a better piece count.

We had read about the program, but had no idea that it was available to other depositories. We requested a demonstration

disc from Margaret and reviewed it ourselves. We too were very impressed and thought this was the answer to our dilemma. We consulted with the government publications staff and tried to troubleshoot as many problems as we thought might occur. Finally, we made the decision to implement. Equipment was purchased and the Marcive electronic Shipping List service was ordered.

January 1, 1994 was the target date for the closing of the paper shelf list and the start of the new electronic one. However, several things were not in place, so we weren't actually ready to start at that time. We decided we would stamp, SuDoc, and shelve the documents as they came in, but not check-in the actual lists until we were up and running electronically. Finally, in May, the computers and software were in place, and we were ready to begin.

The most intensive part of getting started was the coding of the items database with serial and monograph information, which must be given to each item number to ensure its proper database destination, and special handling instructions. Initially, we had thought the coding would be relatively easy by using the Superseded List and the List of Classes. However, it was not long before we decided a detailed examination of our paper shelf list for specific details was necessary. We coded all records we could initially identify, and decided that the ones we missed could be done on the fly.

We stopped processing boxes completely in May and did nothing else for 4-6 weeks except locate and enter data in the database file. We found that working all day with shifts of 2 people (one to read instructions, one to enter) was necessary to achieve maximum work flow.

When the items database was finally completed in early June, we began processing the backlog of boxes, and when they were finished, we went back and checked-in the shipping lists we had received from January to May. By the middle of July we were completely caught up and were waiting for boxes from GPO.

We are running USDOCS on a library server but only Government Publications staff members can access it. Government Publications staff members have terminals at their desks and they do not have to share one or two departmental machines. In fact, the only problems we have encountered with the program at all were as a result of loading it on this particular server. But after figuring out a few critical local changes, it has worked like a charm.

[Proceeded to demonstrate check-in features, database maintenance functions, and items database construction.]

Regional Depository Libraries

Working Groups, Committees, Associations, Task Forces, Coalitions: What Have We Been Doing for the Past Few Years?

Julia F. Wallace
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Minneapolis, MN

Good afternoon. As you can see, I do not have a spiffy Powerpoint illustrated program to jazz up my presentation, but I have decided that if I did, the first slide would say "Been there, done that." This is the point in the conference where we discover that there is nothing new under the sun, and I'm going to identify and summarize some of the many activities and reports in which we in the depository community have participated. Luckily, librarians know that studying history can be a useful exercise, and that revisiting where we have been can inform us as we decide where we should be going.

I have provided you with a brief handout which identifies some key activities and reports since 1986. These reports, and others as well, are listed in the Bibliography for the GPO Study, which is found in Attachment D-3. For those which are available on the Internet, I have provided current URLs.

As you will see as I go through these materials, we have gotten pretty good at enunciating principles and goals, but we are less articulate when we try to define new structures for the Federal Depository Library Program (FDLP). The trends which influenced these efforts will seem familiar: changes in technology and in policy, different perceptions of the correct role for the government in information dissemination, and constantly threatened Federal budgets.

While I will focus here on some specific reports, I need to acknowledge that many other activities also were going on during this same 10-year period. Of course the initiatives of Congress provided the framework, and within this time period a number of bills were introduced which provided incentives for the library community to take action. Congress also held some landmark hearings on government information during this period. Our own associations also were busy. The Special Libraries Association has held several related Institutes, most recently in the fall of 1994. The American Association of Law Libraries (AALL) has a Government Relations Committee which holds telephone conference calls monthly, and their Washington Office follows government information issues actively. The AALL Annual Meetings frequently include programs to update members on these issues. The Association of Research Libraries also maintains an influential presence in Washington, and committees and task forces have studied issues related to government information.

The American Library Association (ALA) keeps watch on these issues through its Washington Office, which prepares a recurring report entitled "Less Access to Less Information By and About the U.S. Government." The office has started its online ALA Washington Office Newsletter (ALAWON), which covers government information issues along with other issues of interest to librarians. And of

course ALA's Government Documents Round Table (GODORT) is a major focus for activities of government documents librarians. In addition to active participation in legislative action, GODORT has prepared white papers, position papers, and statements of principle. GODORT's Ad Hoc Committee on the Internet just released its "Whitepaper: Government Information in the Electronic Environment" in January; it is being published in the March 1996 issue of *Documents to the People*. GODORT has presented major programs on government information and depository libraries at several recent annual conferences.

And of course the Depository Library Council has studied and discussed the restructuring of the depository library program, especially since 1991; while I will not be summarizing all of those discussions, the Council's report on the subject is one of the eight documents on the list of landmark activities.

The ARL Study¹

In 1986 the Association of Research Libraries (ARL) convened a Task Force on Government Information in Electronic Format. The task force was chaired by D. Kaye Gapen, and included Nancy Cline, Malcolm Getz, Jean Loup, and Barbara von Wahlde. The report, released in October 1987, is entitled *Technology & U.S. Government Information Policies: Catalysts for New Partnerships*.

To indicate how little the basics have changed in ten years, I'd like to quote from the first paragraph of the report:

"The terms and conditions of public availability of U.S. Government information are very much in question. Technological advances in information storage and retrieval have created circumstances and concerns about access to and dissemination of information in electronic formats. Questions surrounding the issue are entangled with concomitant pressures to reduce Federal spending, shrink the size of government, minimize government competition with

private enterprise, and gain a national competitive advantage—both economic and strategic—over foreign nations. Longstanding tensions inherent in the laws, regulations, and practices that collectively make up U.S. Government information policies are exacerbated by these pressures and by the opportunities, challenges, and financing questions posed by information in electronic formats. Technology, moving faster than policy development, has left U.S. Government information programs resting on uncertain foundations."

The ARL report suggests that circumstances warrant a reassessment of library responsibilities in view of new opportunities made feasible by technologies. It presents five scenarios for dissemination, and a three-tiered model for a depository library program. The dissemination scenarios have similarities to visions offered today, with some interesting differences.

- 1) Limited Government Role. Government offers data on tape to libraries, which mount datafiles and provide necessary software and service.
- 2) Government Agency Manages Dissemination. Each agency, acting independently, provides data from agency or intermediary computers, with each agency setting its own standards.
- 3) GPO Acts as Publisher. Agencies are required to provide the Public Printer with raw data; GPO puts data in standard format and provides it along with public domain or generic software for the Depository Library Program.
- 4) GPO Provides Full Support. GPO provides fully usable information to libraries, and pays any telecommunications charges.
- 5) Data to the Highest Bidder. Agencies auction data to the highest bidder, with exclusive rights to dissemination; libraries pay retail price for electronic information.

The three-part model for the depository program presented by ARL is reflected in several of the later reports we will look at. The three levels are:

- 1) Basic Services. Information centers with small collections and computerized gateways to information located elsewhere.
- 2) Intermediate Services. Larger collections, and some local electronic information, with gateways to more electronic government information located elsewhere; some mediation and synthesis provided.
- 3) Full Services. Research level collections and a full range of electronic information, both locally-available and gateways; services include value-added characteristics and specialized software packages.

ARL's task force proposed six principles, which also will sound familiar:

- 1) Open exchange of government information should be protected.
- 2) Federal policy should support the integrity and preservation of government electronic databases.
- 3) Copyright should not be applied to U.S. Government information.
- 4) Diversity of sources of access...is in the public interest and entrepreneurship should be encouraged.
- 5) Government information should be available at low cost.
- 6) A system to provide equitable, no-fee access to basic public information is a requirement of a democratic society.

OTA Report²

While it was not a library community activity, the OTA's report *Informing the Nation: Federal Information Dissemination in an Electronic Age*, published in 1988, provided a foundation for much of the discussion to follow. Many librarians and library associations provided input to this report. It acknowledged the essential role of Federal information, and the new opportunities for cost savings and efficiency presented by technological advances. However, it recognized the eroding of the institutional roles of centralized agencies like GPO and NTIS, and identified new concerns for equity.

The report suggested that technology had outpaced the statutes, and that Congressional action was urgently needed. It proposed a reorganization of the Federal Depository Library Program, and considered relocation within the government of both GPO and NTIS. It also recommended a governmentwide index of information regardless of format, which would begin with a combination of the GPO's *Monthly Catalog* and NTIS's *Government Reports Announcements and Index*.

From 1988 to 1991, the ideas percolated, more information became available in electronic formats, and Congress held more hearings on electronic information. The GPO initiated pilot projects in new technologies, and also faced budget pressures. In 1991, the reorganized Depository Library Council initiated a series of focused discussions on the GPO's electronic future and the structure of the FDLP.

The Librarians' Manifesto³

On Library Legislative Day in 1992, Ridley Kessler and Gary Cornwell visited with staff of the Joint Committee on Printing. At that time the JCP was chaired by Rep. Charlie Rose of North Carolina, and they met with his JCP staff director, John Merritt. Ridley is the regional librarian for North Carolina, and Gary was the incoming chair of Depository

Library Council. In response to the questions and concerns expressed by Mr. Merritt, they volunteered to prepare a document identifying the major problems of the FDLP and outlining possible solutions. They enlisted the help of several other colleagues, all practicing documents librarians, and in June submitted their report to Mr. Merritt. The document was later revised for publication in the *Government Publications Review* as "Problems and Issues Affecting the U.S. Depository Library Program and the GPO: The Librarians' Manifesto."

In its introduction, the Manifesto acknowledges the "outdated vacuum cleaner" description of the FDLP which had been put forth by Peter Hernon in a 1992 article in *Government Information Quarterly*. The document acknowledges that the current depository library structure is inadequate and inefficient, and outlines a layered system for libraries and a revitalized role for the GPO. The Manifesto envisioned a transition of the GPO from a print shop and warehouse to an information provider for the government, in partnership with the depository libraries. GPO would become an intermediary, a coordinator, and a gateway to agency-based electronic information, eventually developing a common user interface.

The Manifesto suggests that some problems in Federal policy arise from differing definitions of "government document," and recommends that Title 44 should be revised to "securely fold electronic products and services into the Depository Library Program." It also acknowledges the problems of cost shifting from the Federal Government to libraries, and identifies software and license fees as major problems.

The general structure proposed for the FDLP consists of the following components:

1) Basic Service Centers. Small depository collections of documents, with few requirements for collection management or retention.

- 2) Public Access Libraries. Similar to current selective depositories, with chiefly high-interest materials, and with flexible requirements for collection management.
- 3) Resource Centers. Large libraries which would maintain comprehensive collections and provide document delivery to smaller libraries.
- 4) Gateway Libraries. With financial support from the Federal Government, these would provide gateways and delivery services for electronic databases, and also would assist other libraries with training and support.
- 5) National Depository Library. A national collection of last resort, and also a reference and management resource for other program partners.

The Manifesto recommends that before any firm recommendation for a new structure is made, several tasks must be accomplished. First, the goals and objectives of the FDLP must be fully delineated and examined. Second, the dissemination needs of Federal agencies must be analyzed. Third, the information needs of the users must be thoroughly examined. And finally, various scenarios for restructuring the system must be evaluated in terms of cost, benefits, efficiency, and accessibility.

Dupont Circle Group⁴

At the fall 1992 meeting of the Depository Library Council, the GPO discussed its major budget problems, and in a letter to all depositories that November, Superintendent of Documents Wayne Kelley outlined severe cost-cutting measures which were being proposed. Shortly after this, at the Midwinter 1993 meeting of ALA, GODORT members heard two challenges to become directly involved in planning for the future of the FDLP. Gary Cornwell, Chair of Depository Library Council, told attendees that change would come soon, and that depository librarians needed to be an active part of the

planning. Shirley Woodrow, representing Joint Committee on Printing chair Charlie Rose, challenged depository librarians to identify ways to economize in the depository program. At the same time, several bills had been introduced in Congress which could profoundly affect the FDLP.

In response to these multiple challenges, the chairs of Council and of GODORT (Gary Cornwell and Julie Wallace) called together a small group of depository librarians to meet together just before the spring Federal Depository Library Conference in April 1993. The group, mainly former chairs or leaders in Council or GODORT, met for two days in the ARL offices overlooking Dupont Circle in Washington, hence the name of the group. The draft report which the group pulled together was distributed and discussed at the conference, and was distributed widely in the depository community. It was published electronically as well, and comments were encouraged.

The Dupont Circle Group Discussion Draft looked at both the governance of the FDLP and the structure of the program. It presented three governance models and two alternatives for government information service. It started with a mission statement and goals for a Federal Information Access Program. The mission is "to make government information freely available in usable formats to meet the diverse needs of multiple publics." The draft suggests that the program must be tied to the life cycle of information, ensuring public participation in all phases of information creation, distribution, access, use, and evaluation.

A very useful element of the draft is an itemization of benefits which a program provides, both to the public and to the agencies. It presents a clear statement of the strengths of the program, and proposes "Staking our claim in the electronic environment." A "Ghost of DLP Future" is also presented, suggesting a future with less and less information available through the program if the status quo were to be

maintained.

The two service models in the draft have similarities but also basic differences. The first, termed "Federal Information Service Centers," is a three-level model with some similarities to the earlier ARL and Manifesto models. It would include:

- 1) Basic Service Centers, with small predetermined or selected collections.
- 2) Intermediate Information Centers, with larger collections and higher level connectivity; these centers would provide electronic gateways, value-added approaches, and more advanced mediation.
- 3) Full Service Centers, which would provide all services of Intermediate Centers, and also would provide local network services, locally-mounted databases and locally-developed software; they would also provide document delivery and research assistance.

The second service model was entitled Government Information Access Centers and envisioned a flexible, multifaceted access system providing a variety of options for participation based on local needs and cooperative planning. Libraries from small to large, and from mainly hard copy to mainly electronic, could all be participants.

The Dupont Circle draft also provided a list of ten interim proposals to aid in the transition, including a suggestion for minimum technical requirements for depository libraries.

Depository Library Council Report⁵

By the time the Dupont Circle Group met, Council was already on its way to creating its own report on the future of the FDLP. At the fall 1992 meeting the discussion of the FDLP's future was followed by appointment of an editing committee headed by Council member Robert L. Oakley. It was discussed at the spring 1993 Council meeting, and a

discussion draft was distributed to the community for comment in June 1993. Comments were incorporated into the final report, "Alternatives for Restructuring the Depository Library Program: A Report to the Superintendent of Documents and the Public Printer from the Depository Library Council," which was completed in September 1993.

The Council report starts out with a brief history of the program and a statement of its values and objectives. A set of 10 assumptions is set forth, including assumptions that the FDLP is a vital link between citizens and government, but that as currently structured it is floundering. It assumes increased expectations from users for electronic information, a continuing need for information professionals as intermediaries, and many diverse points of access in addition to libraries. It also assumes that there may be some depositories which will not be able to be partners in the new electronic future.

The report outlines 10 possible scenarios for a future depository library program, which are not necessarily mutually exclusive but provide a variety of ideas for discussion. Some of the organizational scenarios include the following:

- 1) The ARL model, as outlined above.
- 2) A Direct Support Model, incorporating some ideas from the information industry suggesting that libraries be provided with credits or vouchers to select information products and even electronic equipment from government or private sources.
- 3) A network of super-regionals, or an alternative system of subject-based regionals, which would be libraries of last resort for either a geographic or a subject area, with major collection and service responsibilities. These would be fewer in number than present regionals, perhaps 10 in all.
- 4) A system of electronic depositories, which would provide appropriate hardware,

software and assistance to serve users and other libraries.

- 5) Recognize a new role for depositories when electronic government information comes through networks or a single point of access, with the FDLP creating a foundation for building electronic dissemination systems. While this scenario asks whether there is any need for a program in the electronic age, and identifies many barriers, it also sets out elements of a successful system and presents the features of the FDLP which could allow it to play an important role.

Some additional concepts are included, such as a national collection of last resort, a recommendation for mandatory minimum technical standards, and a suggestion to rename the program. Council prepared this paper to stimulate discussion, distributing it widely in the depository community and to members of Congress.

Chicago Conference on the Future of Federal Government Information⁶

Following the discussion of the Dupont Circle draft, the participants in that effort agreed that a general, open meeting was the next logical step. A three-day conference was convened in Chicago October 29-31, 1993, and over 150 librarians and others attended. The purpose of the conference was to articulate a vision for dissemination of Federal Government information, develop strategies for the immediate revitalization of the FDLP, and identify methods to enhance the role of librarians in the life cycle of government information.

The conference agreed on a mission statement: "The mission of a Federal Information Dissemination and Access Program, offered through cooperating libraries, is to provide and insure equitable, no-fee access to government information in usable and multiple forms to the people of the United States of America." The report from the conference presents underlying

values, a statement of goals, and descriptions of history and recent developments. The report then provides a framework for a model program. It outlines the responsibilities of each of the program partners: producing agencies, the central coordinating government authority, and participating libraries and librarians. The organizational framework is flexible, providing for planning and coordination by geographic clusters of libraries.

The Chicago Conference report also provided many suggestions for both the GPO and depositories for revitalizing the FDLP as part of the transition to a mix of print and electronic information. The report was widely disseminated and discussed, and led directly to the final two activities in my litany.

Coalition of Many Associations Framework⁷

In the spring of 1995, the leaders of several library associations convened to revisit the Chicago Conference report in light of new legislation and changes in technology. In order to focus discussions more clearly, the group formulated a brief 2-page working document to carry to each of the associations. As with the previous documents, it includes a mission statement: "The mission for an enhanced Federal Information Dissemination and Access Program is to guarantee ready, equal, equitable, no-fee access to government information regardless of format to the people of the United States of America through participating Libraries. Building on the success of the current FDLP, the nation must develop a broader Federal Information Dissemination and Access Program."

The framework identifies 7 essential components of the enhanced program, and provides a grid which identifies the responsibilities of the program partners in the stages of the life cycle of government information (Creation, Dissemination, Access, Use, Preservation, Evaluation). This model uses the three program partners from the Chicago Conference report (Producing Government Agencies, Central Operational

Authority, and Participating Libraries) and adds Users as a fourth. The Framework document was officially endorsed by ARL, ALA, SLA and AALL in 1995.

The ALA Forum⁸

In July of 1995, ALA President Betty Turock and the ALA Washington Office convened a two-day forum of invited representatives from a broad group of organizations to address policy issues and to develop models for Federal responsibilities for information dissemination and for a reinvented FDLP. In addition to the library associations involved in the previous efforts, this forum also included the Chief Officers of State Library Agencies, the Urban Libraries Council, and the Medical Libraries Association. The forum produced a report with two parts:

- I. Reconceptualize Federal Information and Access Responsibilities.
Proposes a new governance structure involving all three branches of government and all bodies with explicit information dissemination missions, with operational authority vested in a Chief Federal Information Dissemination Officer.
- II. Reinvent the Current Federal Depository Library Program: A Federal/State/Local Library Partnership Program.
Proposes a new partnership program, much more flexible than the present FDLP and based on local and statewide planning. The goals include the familiar "equitable, no-fee, efficient and dependable access," but also include goals relating to training and to measurement and evaluation. The chief emphasis is on empowering State and local libraries and consortia to design their own systems for services and for preservation, in partnership with the Federal Government.

So, as I said at the outset, we as depository librarians have enunciated our mission and goals, and we have made many proposals for reinventing our depository library program. I

would also point out that the majority of the reports cited here suggest new names to replace the outdated "depository" term, as the GPO's Study itself does. The discussion of these issues is not over - the biggest challenge continues to be to move it beyond just the depository library community and to convince the larger information community and the Congress of the continuing need for and benefit of a Federal information dissemination and access program.

1. Association of Research Libraries. Task Force on Government Information in Electronic Format. *Technology & U.S. Government Information Policies: Catalysts for New Partnerships*. Washington, D.C.: Association of Research Libraries, [1987].

2. United States. Congress. Office of Technology Assessment. *Informing the Nation: Federal Information Dissemination in an Electronic Age* (OTA-CIT-396). Washington, D.C.: G.P.O., 1988. (Y 3.T 22/2:2 In 3/9)

3. Cornwell, Gary, Ridley R. Kessler, Duncan Aldrich, Thomas K. Andersen, Stephen M. Hayes, Jack Sulzer, and Susan Tulis. "Problems and Issues Affecting the U.S. Depository Library Program and the GPO: The Librarians' Manifesto." *Government Publications Review* 20, no. 2 (March/April 1993): 121-140.

4. "Dupont Circle Group: Discussion Draft," April 1993. *The Dupont Circle Reporter: An Electronic Informal Newsletter for the Federal Depository Community*. 1993.
<gopher://arl.cni.org:70/00/info/govinfo/dupont.circle/reporter>

5. Depository Library Council to the Public Printer (U.S.). "Alternatives for Restructuring the Depository Library Program: A Report to the Superintendent of Documents and the Public Printer from the Depository Library Council." Sept. 1993. *Administrative Notes* 16, no. 16 (Dec. 5, 1995): 23-59.

6. "Reinventing Access to Federal Government Information: Report of the Chicago Conference on the Future of Federal Government Information, Chicago, Illinois, October 29-31, 1993." *Documents to the People* 21, no. 4 (Dec. 1993): 234-246.
<gopher://arl.cni.org:70/1m/info/govinfo/dupont.circle/chicago/post-chicago.txt>

7. "Enhanced Library Access and Dissemination of Federal Government Information: A Framework for Future Discussion." Working Document endorsed by the American Association of Law Libraries, American Library Association, Association of Research Libraries, Special Libraries Association, 1995. *American Association of Law Libraries Newsletter* 27, no. 1 (September 1995): 14-15.
<gopher://arl.cni.org:70/00/info/govinfo/govinfo> and
<gopher://arl.cni.org:70/00/info/govinfo/govinfo.partners>

8. "Model for 'New Universe' of Federal Information Access and Dissemination: Preliminary Results of Forum on Government Information Policy, July 20-21, 1995, Sponsored by American Library Association." *ALAWON, ALA Washington Office Newsline* 4, no. 77 (August 9, 1995).
<gopher://ala1.ala.org:70/11/alagophwashoff/alagophwashoffforum>

A Brief Annotated Chronology

1986-87

The Association of Research Libraries convened a special task force to investigate new ways to deliver government information as it becomes available in electronic formats, and new models for the depository library program. The task force's report includes a set of six draft principles.

Association of Research Libraries. Task Force on Government Information in Electronic Format. *Technology & U.S. Government Information Policies: Catalysts for New Partnerships*. Washington, D.C.: Association of Research Libraries, 1987. (Task Force Report No. 3)

1988

While not a library community activity, the publication of the OTA's report on Federal information still serves as a landmark in the discussion of the transition into the electronic age. Many library associations and librarians contributed to the report.

United States. Congress. Office of Technology Assessment. *Informing the Nation: Federal Information Dissemination in an Electronic Age* (OTA-CIT-396). Washington, D.C.: G.P.O., 1988. (Y 3.T 22/2:2 In 3/9)

1991

The reorganized Depository Library Council initiated discussions of GPO's electronic future and the structure of the Federal depository library program. These discussions continued through several Council meetings, resulting in the report listed under 1993 below.

1992

Gary Cornwell, incoming chair of Depository Library Council, and Ridley Kessler, regional librarian for North Carolina, responded to questions from John Merritt, staff director of the Joint Committee on Printing, by volunteering to prepare a document detailing the major problems confronting the FDLP and offering possible solutions. They enlisted the assistance of several colleagues, and prepared a report which was presented to the JCP in June. The report was expanded and published the following year.

Cornwell, Gary, Ridley R. Kessler, Duncan Aldrich, Thomas K. Andersen, Stephen M. Hayes, Jack Sulzer, and Susan Tulis. "Problems and Issues Affecting the U.S. Depository Library Program and the GPO: The Librarians' Manifesto." *Government Publications Review* 20, no. 2 (March/April 1993): 121-140.

A November letter to depository libraries from Superintendent of Documents Wayne Kelley outlined a major budget shortfall and proposed program cuts.

1993

Attendees at the ALA Midwinter Conference in January heard challenges from the Joint Committee on Printing and the chair of the Depository Library Council, to take an immediate and active role in shaping a new depository library program.

In April, a small group of depository librarians assembled just before the Federal Depository Conference to get the discussion started.

"Dupont Circle Group: Discussion Draft," April 1993. *The Dupont Circle Reporter: An Electronic Informal Newsletter for the Federal Depository Community*. 1993. <gopher://arl.cni.org:70/00/info/govinfo/dupont.circle/reporter>

Council continued discussions of the GPO electronic future, and issued a draft for discussion in June 1993. After community input, the report was issued in September.

Depository Library Council to the Public Printer (U.S.). "Alternatives for Restructuring the Depository Library Program: A Report to the Superintendent of Documents and the Public Printer from the Depository Library Council." September 1993. *Administrative Notes* 16, no. 16 (December 5, 1995): 23-59.

In October, over 150 librarians and others traveled to Chicago to deliberate the future of Federal Government information and the depository library program.

"Reinventing Access to Federal Government Information: Report of the Chicago Conference on the Future of Federal Government Information, Chicago, Illinois, October 29-31, 1993." *Documents to the People* 21, no. 4 (December 1993): 234-246; *Administrative Notes* 14, no. 24 (November 30, 1993): 11-29.
<gopher://arl.cni.org:70/1m/info/govinfo/dupont.circle/chicago/post-chicago.txt>

1995

A Coalition of Many Associations (COMA) released a two-page framework, an update and distillation of issues from the Chicago conference.

"Enhanced Library Access and Dissemination of Federal Government Information: A Framework for Future Discussion." Working Document endorsed by the American Association of Law Libraries, American Library Association, Association of Research Libraries, Special Libraries Association, 1995. *American Association of Law Libraries Newsletter* 27, no. 1 (September 1995): 14-15.
<gopher://arl.cni.org:70/00/info/govinfo/govinfo>

The American Library Association convened a two-day forum of representatives from a broad group of organizations to address policy issues and develop models for Federal responsibilities for information dissemination and for a reinvented depository library program.

"Model for 'New Universe' of Federal Information Access and Dissemination: Preliminary Results of Forum on Government Information Policy, July 20-21, 1995, Sponsored by American Library Association." *ALAWON, ALA Washington Office Newslines* 4, no. 77 (August 9, 1995).
<gopher://ala1.ala.org:70/11/alagophwashoff/alagophwashoffforum>

Regional Depository Libraries

How Ready Are We to Become Electronic Depository Libraries?

Lily Wai

University of Idaho

Moscow, ID

Survey Responses

Total Regional Depository Libraries: 53
 Total number of libraries responded: 47
 Response rate: 89%

Academic: 31 out of 33 = 94%
 Public: 3 out of 5 = 60%
 State: 12 out of 15 = 80%
 Unknown: 1

1. Do you have computer stations that meet the "Recommended Minimum Technical Guidelines for Federal Depository Libraries"?

Yes: 36 (77%)
 Are they for staff use only? 7 (19%)
 For public access as well? 29 (81%)

2. Do you have computer stations to access Internet and GPO Access gateways?

Yes: 47 (100%)
 Are they for staff use only? 12 (26%)
 For public access as well? 35 (74%)

3. Do you have computer stations for searching CD-ROM databases?

Yes: 47 (100%)
 Are they for staff use only? 3 (6%)
 For public access? 44 (94%)
 Are they connected by Local Area Network (LAN)?
 No: 23 (50%)
 Yes: 24 (50%)

Accessible at your library?

Yes: 24

Outside of the library?

Yes: 11 (49%)
 No: 12 (51%)

4. Do you have computer connections to do the following?

E-Mail: 99%
 Yes: 46
 Staff only? 28
 Public use as well? 18
 No: 1

Telnet/FTP: 91%
 Yes: 43
 Staff only? 19
 Public use as well? 24
 No: 3

WWW/Lynx: 100%
 Yes: 47
 Staff only? 14
 Public use as well? 33
 No: 0

Download/Print: 99%
 Yes: 46
 Staff only? 8
 Public use as well? 38
 No: 1

5. Do you have a technical expert available to assist you in the operation or installation of library computer equipment?

Yes: 45 (96%)
No: 2 (4%)

Do you have access to technical training provided by your community or institution?

Yes: ?
No: 1

Is there funding available for technical training?

Yes: ?
No: 1

6. Do you have staff who would have the professional expertise to make the transition to an electronic depository library by the end of fiscal year 1998?

Yes: 44 (94%)
At what level? Descriptions: (Internet search engines, Web browsers, GPO Access, etc)
All of above: 31
Needs more training: 14
Not enough staff: 2
Very basic, low level: 1
No description: 2
No: 2 (4%)
Unknown: 1 (2%)

7. Will your staff be able to participate in staff development or training programs provided by GPO and your Regional to increase their knowledge and skills with electronic information resources?

Yes: 38
Unsure: 6
No Answer: 3

What kind of support will your library provide?

Release time for staff? 42
Funding for travel?
Yes: 13

Some: 10
Maybe: 10
No: 4
No answer: 6

8. If you cannot meet the guidelines, will you consider relinquishing your depository library status when the Federal depository library program changes to a predominantly electronic program by the end of FY 1998?

Yes: 1
No: 15
NA: 25
Undecided: 6

Will you consider retaining your present collection, and select only the paper core list depository items after 1998?

Yes: 3

Comments:

"It has been raised as an option"
"That's something we consider on a fairly regular basis."

9. Please comment on the Electronic Federal Depository Library Program: Transition Plan, FY 1996-1998. (See Administrative Notes, v. 16, no. 18, Dec. 29, 1995)

"The Plan contained a lot of 'assumptions.' From sources I know, government agencies will not be ready to meet GPO's standards mentioned in the plan, let alone a number of depository libraries. From my sources, GPO is finding out that scanning documents will be more expensive than microficheing them. A number of documents are color sensitive (i.e., color has significant information content. Will all institutions have color monitors and color printers. Don't think so.) A number of people are being refused access to Web connections because 'lines are busy.' This is going to only get worse. People who need information and are being refused Web access due to line overloads are calling me for the 'paper' format!!! I am finding the public becoming less patient and more frustrated

with electronic access."

"Very ambitious."

Arizona depository librarians' group concerns:

STANDARDIZATION OF ELECTRONIC SEARCH SOFTWARE:

Staff training needs to be increased—difficult for documents staff to keep up with software intricacies, but highly unlikely for non-documents librarians (Census is example of good software). Burden will be on GPO to urge agencies to use "user-friendly" (intuitive) standardized software.

TECHNICAL SUPPORT FOR ELECTRONIC SOURCES (to aid staff and patrons):

GPO provide technical support. GPO provide fiscal support for equipment and training to deliver electronic information. Technical difficulties referring to parts of several documents at the same time.

INTERNET ACCESS DIFFICULTIES:

Phone lines in Arizona are not reliable. Questionable quality for online computer access. Patron assistance is more lengthy with electronic. Instead of handing them a book, there is a need to explain computer process. Downloading electronic data puts printing costs on the library/users. Another instance of money determining access to information. When libraries are unable to continue their commitment or do limited service, others have higher level of use and referrals.

PRESERVATION:

Can we be assured of access to the older files in the future? Would electronic media be refreshed so that data doesn't slip on tapes, etc.?"

"I have held a statewide meeting of Colorado Federal depository libraries (plus four from Wyoming) with depository librarians and

depository library directors. I will be writing letters to GPO and Congress with the concerns expressed at the meeting. Probably the greatest concern is the timetable and the fear that the Federal Government will not be ready to accomplish everything outlined in the Transition Plan with the result being a great increase in government information not included in the depository program. Adding a year or two to the timetable would also allow depositories to better prepare."

"Did not adequately address the impact on library users who cannot utilize electronic technology or libraries that will in essence be called upon to 'publish' in paper many documents from electronic copies for local use or even just on demand by patrons. The cost of this is expected to be absorbed by the libraries. Did not fully address the issue of the archiving of older publications that would be necessary: (1) Where would they go; (2) What arrangements would be made to provide continued access to them; (3) would there be an effort to have certain networked depositories provide large servers holding certain classes of older documents for ready library style access so as not to have to rely on NARA?"

"We are heartsick about the many proposed changes to the depository program, and anxious about its technological implications. Presently, we have one Pentium PC with public access. Where the funds will come from to add 5-10 to this collection, I have no idea! (our library is presently in a budget crisis; our book budget this year is zero for all collections, with a few small exceptions.)"

"The time has come, and most depository libraries are willing. What's lacking are the computer equipment and staff training or re-training. This needs \$\$\$ which most libraries don't have."

"It's something for which the time has come, but it is moving too swiftly. Obviously there are lots of issues to iron out."

"My concern, as a regional and as a relatively

well funded research library, is less with how well we will be able to deal with the Electronic Depository than how GPO will be able to achieve what they are proposing to do. I don't believe the transition can be achieved by 1998. I am concerned about GPO being given adequate support from Congress to accomplish the goals of the plan. I am concerned about losing total free access to some materials--like FBIS--and I'm concerned about non-computer literate users around my state."

"Our concerns are typical of the depository community: lack of STANDARDIZATION of format of electronic materials, archiving of materials, shift of cost of printing to the depository library (or, more probably, the library user.)"

"I haven't read (the plan) yet."

"The infrastructure is not yet in place, in depositories or in GPO. The method for including in the FDLP electronic publications not actually on GPO computers is very vague at this point. Proposals for long-term access do not have adequate back-up, nor any guarantee of funding for GPO to do what it proposes. What is the incentive to remain a depository?"

"A longer transition period would be helpful so that issues such as ease of use of electronic documents, cataloging, staffing, hardware, and software can be addressed."

"The transition plan is a reasonably good document given the time frame within which it was developed. However, it is optimistic regarding the ability of libraries to adapt to the changes that it proposes in information delivery. The delivery of most information in electronic formats will have significant implications for library budgets, particularly for equipment and personnel training costs. While electronic formats will relieve libraries from some expenses for shelving and space--and presumably processing--the expense of computer equipment and staff training will be difficult for many smaller libraries to

accommodate. I guess it is up to the library community to tackle this problem, to use imagination to discover new sources of funding and community support."

"The plan sounds interesting: there are many publications I'll be happy to see go electronic. There are many others, however, which are not appropriate for reading on a computer screen (or microfiche reader for that matter). My two main concerns are that the archival issue has still not been adequately addressed, and that the bibliographic control issues seem fuzzy. I feel that if the plan goes ahead as written, we will have trouble determining exactly what documents are available, and that the documents will be available for only limited times."

"We have concerns about the speed of the proposed transition, and the fact that the cost and difficulty of printing will be transferred to the libraries. It is difficult to envision such a radically different environment and plan for the unknowns. We also have grave concerns about losing access to information due to the lack of software and/or data provided in raw or unusable formats. Historic preservation questions have also not been answered adequately at this point in time. Comparability of data over the years is also a concern. Privatization of government information threatens the ideals of the DLP and there appears to be an increase of action in this area."

"Needs much more discussion. Libraries need to fight for what their clients need, not just accept what's in the Plan."

"Think it is overdue but is going to be hard for everyone to become proficient in that short a time. However, I have long felt that this was coming and that GPO and Federal Government should have hastened to move to electronics sooner rather than later. Must fix some glaring problems like long term storage and access (archivability), making large bodies of materials accessible. Think GPO should also have capability to produce their own CD's as a storage method for dissemination to

depositories. Also not sure GPO can meet support standards for the entire community."

"I believe the timeline is too short. Five years would have been more acceptable. Several people commented to us their concerns for the handicapped, the amount of equipment that would be needed, and the concern for archiving the materials. Another problem is, Will the CD's of today work on the machines of tomorrow?"

"None of us are going to be ready for this (Plan). I don't think they (GPO) will either."

"The present timetable is too short! The Feds, GPO in particular, are unlikely 'to get their act together' in that short a time. Depositories will be unprepared no matter what the schedule because of technological and fiscal realities. The net result will be a great loss of access to a smaller amount of available information. As usual, the public will not notice that it has been 'short changed' until it's far too late to reverse the process."

"Issues to be carefully considered:

Short-term storage of electronic materials: recent government furloughs which shut down government sites for weeks made government materials at those sites completely inaccessible. Twenty-four hour a day accessibility becomes a MUST when there are no alternative methods available to retrieve needed government information.

Long-term storage: "SOD will maintain access as long as usage warrants." How will this be determined? Documents librarians know that public need can continue for years, and historical information is requested frequently. Printed materials are accessible to all; will electronic sources of information still be accessible as technology changes?"

"Need to add additional titles to the Core List."

"As a Regional Librarian, my comments mirror those reflected in Cass Hartnett's letter to Jay Young, particularly the critical preservation/archiving concerns. I attend DLC and ALA and so will have my opportunity to express my concerns in those venues. Let me just add that I like the tone of what came out of GODORT in San Antonio: good idea, bad timeframe, study should be undertaken, core hard copy items identified, etc."

"This question not answered because no consensus available."

"Don't think all government information we now receive can be converted to electronic format. If GPO does have to be only electronic a lot of information would probably become 'fugitive.'"

Facilities Planning for the Electronic Age

Robert A. Hinton

Indiana University-Purdue University at Indianapolis
Indianapolis, IN

You come in here with minds full of mush... my job is to make you think... Today's topic is "Facilities Planning for the Electronic Age." Before we undertake it we need an historical perspective to understand how facilities planning, if undertaken without appropriate concern for the needs and capabilities of the users of the facility, can have unforeseen, disastrous results.

Eighty four years and two days ago a certain facility, a well planned facility, one that met all of the established standards for its age, and one that employed cutting edge technology, proved, in dynamic fashion, that merely meeting standards, following formulas, and utilizing technology does not guarantee success, or a safe, usable facility. Can you name the facility in question, Mr. Hart? It seems that Mr. Hart could not be with us today. Can anyone name that facility?

Very good, the Titanic. In the case of the Titanic facilities were planned, but without sufficient consideration for the needs and capabilities of the people involved. Established standards were slavishly followed despite their inadequacy in terms of number of lifeboats, crew training, and communication. Now, as then, standards need to be viewed with a jaundiced eye, and exceeded or modified when the standard is insufficient for the needs of the user. Practical common sense should hold sway when planning facilities. Who can tell us, out of the 2,228 passengers and crew the number of lives so tragically lost when Titanic sank? Close. To be precise 1,523 souls were lost. And now, who can name them?

Thank you for indulging me. I've always admired John Houseman's portrayal of Professor Kingsfield in the Paper Chase. I really don't believe you have minds full of mush. On the contrary I respect your abilities to think, read, and absorb the bewildering array of information already published on the major tasks of planning facilities: working with formulas and standards; the pros and cons of pulling twisted pair, coax, or fiber; reading blueprints, negotiating with architects, what a punch list is, calculating space and planning adjacencies, completing a building program, bidding and negotiations. If that is what you want, this is your opportunity to leave because I am not going to talk about any of those topics. I had difficulty deciding how to talk about facilities planning for the electronic age in a way that would apply to all depositories (academic and public, selective and regional, supreme court and yes, even law.) I also considered all of the permutations of facilities planning those depositories might be entertaining - completely new facilities, remodeling existing facilities, for some installing that first computer or network, or upgrading existing ones. The conclusion I came to was that the common denominator was the needs of the user, so my emphasis will be on planning facilities for *people* in the electronic age. I will be trying to get you to think about practical, common sense considerations: things that work, things that don't work, things that sometimes get overlooked, but that make a difference and that will help make the facility you plan usable.

By now some of you are wondering to yourselves, "Why is Bob speaking on this

topic and why should I stay and listen to him?" My library history includes associations with a variety of libraries which have planned facilities and I have been with them during times when they have implemented various technologies. They range from my undergraduate days working at the Normal Public Library in Normal, Illinois, where my facilities planning experience covered "if we move the typewriter to a shelf, we can use the typewriter stand to hold this cutting edge Apple IIe." That was soon followed by running wiring for our state-of-the-art DataPhase terminals. Along the way, during my time as a cataloger at the Kokomo-Howard-County Public Library in Kokomo, Indiana, we mercifully went from those wonderful, monolithic, blue-gray dedicated OCLC terminals to the first microcomputer-based OCLC terminals, brought up an OPAC and circulation system, and remodeled the library building. While I was at Miami University in Oxford, Ohio, we brought up an Innovative Interfaces system. Presently I am with University Library at IUPUI where in 1993 we moved from an overcrowded facility into our current \$32 million dollar high-tech showcase, where we are pushing hard on the edges of the electronic age.

Since I will be using our library to illustrate some of my points, I need to tell you about our environment. [OVERHEAD, exterior view of University Library] University Library at Indiana University-Purdue University at Indianapolis serves an urban campus of 27,000 students pursuing 174 undergraduate and graduate degree programs. From the beginning the library was envisioned to fill the task of, as Will Manley's October 1, 1995 Booklist column, "Clean, Well-Lighted Stacks" puts it "...preparing for a vision of tomorrow and taking care of the details of today..." Taking these opposing goals in reverse order:

The details of today are taken care of by: 5 floors of 256,880 square feet of assignable space, 1 million volume capacity, and every floor is stressed to accommodate compact shelving. One thousand four hundred seventy study spaces are comprised of 641 study

carrels, 42 group study rooms, 40 faculty study rooms, 2 classrooms, a 100 seat auditorium and adaptive education accommodations.

For the "vision of tomorrow" that we have implemented today, connectivity, flexibility, and expandability were vital elements: [OVERHEAD, closeup of SIECOR box] every office, every work area, every classroom, every study carrel has a high-end power and data connection, over 1700 in all, and all capable of connecting to the Internet. Each of these connections has two twisted pair copper lines for voice transmission, two twisted pair copper lines for data transmission, two single mode fiber optic lines for high-speed data transmission, and one multi-mode fiber optic cable for delivering full motion, sound, and images. To enhance flexibility for the future, conduit was installed that will permit establishing new connections roughly every 5 feet. Approximately 60 dedicated Express OPAC stations are distributed throughout the building and in the stack areas. There are over 120 Scholar's Workstations in the library. Sixteen are housed in the Electronic Reference Room that sits across from the reference desk on the second floor of the library, the rest are distributed amongst the upper floors, [OVERHEAD, third floor cluster of Scholar's Workstations] and in the electronic classroom. [OVERHEAD, electronic classroom 0106, side view] Current base level for a Scholar's Workstation [OVERHEAD, closeup of student at Scholar's Workstation] is either an Intel based 486 with 16 meg of ram, or a Macintosh 660AV, both platforms with a 17 inch color monitor. Every Scholar's Workstation is connected to the campus broadband and to the Internet. Each group of four Scholar's Workstations is networked to a laser printer. [OVERHEAD, third floor cluster of Scholar's Workstations] Several Pentium machines have been installed, and as more are added the "old" Scholar's Workstations will migrate to OPAC status. The Scholar's Workstation concept allows students, faculty, and the public to identify and access information regardless of location or format (text, image, sound, or full-motion video),

retrieve the information, and produce a finished product from a single workstation. Connections to the Internet, scripted gateways to other library catalogs, and locally mounted indexes and full-text products provide access to information. The workstations make available a variety of word processors, spreadsheet programs, database programs and presentation software to assist users in producing the end product. [OVERHEAD, close up of laptop] Laptops can be checked out for use in the library and connection to any of the activated jacks in the building.

This electronic age we are supposed to be planning facilities for, this transition plan we rush to prepare for, consists of wave upon wave of new technologies; hardware and software that arise and are rapidly replaced, formats and standards that are adopted and made obsolete, new methods of communicating and modes of interacting that roll through segments of our society and are embraced by some, rejected by others, unaffordable to many. One constant element in all of this sea change, at times lost in the bustle to partake of the electronic age, is the people the electronic age should benefit. Several of you have in your possession a notecard. Will those with note cards please stand? Pay close attention to these people. They represent a cross section of your users, and I will introduce you to them from time to time.

Everyone except those with "S" cards please sit. Those who are comfortably seated, please raise your dominant hand. Now, carefully take your dominant hand and place it firmly under your cheek. Because we all know that any instruction can and will be misunderstood (how many times have you instructed patrons to "press F1" only to have them press the "F" key and the number "one" key sequentially?) I will rephrase as unambiguously as I can. SIT on it. Now, please continue taking notes. "S" card holders, my southpaw sistren and brethren, please be seated while I educate the masses on how facilities planning affects us. When you place equipment, leave ample room on both sides of the keyboard to

accommodate the mouse, and any textual material that needs to be used for reference or writing. [OVERHEAD, workstation in Electronic Reference Room] As you can see in this shot with the computer in the corner there is no maneuvering space on the left side of the unit. [OVERHEAD, closeup of student at Scholar's Workstation] This setup works much better. Do not route the cabling so that it is impossible to move the mouse to the other side of the unit. Once I sat in a meeting where it was seriously suggested that to prevent theft, the mouse pads be glued to the table. To the right-hand side of the unit, of course. On the IBM in my office I move the mouse to the left of the keyboard and I go into Control Panel and switch the mouse buttons. That setup works best for me. It drives the Client Support Team nuts when they have to visit to fix a problem, but I've made enough accommodations for their world. My office, my rules. Some of your patrons may take similar attitudes with public use stations. Sometimes the answer to "Why isn't the computer responding, I clicked the mouse button?" is that the buttons have been flipped by the last patron.

Those of you with "V" cards should also have a length of black crepe paper. Please get one of your neighbors to blindfold you. You represent the visually-impaired. I am also including in this group eyeglass wearers, especially bifocal wearers. Glare from monitors and overhead lights, and furniture that isn't deep enough to keep huge monitors out of your face have glasses wearers adopting all sorts of weird poses trying to see the screen clearly. Low-vision and legally blind patrons need you to put electronic age technology to work for them: technology that magnifies the screen, Braille keyboards, speech-recognition software and text-reading devices. Make it available to them.

Elegy for an unknown feline or, power

Most people would agree that power is a necessary ingredient for a facility in the electronic age, and would plan for sources of clean, conditioned power to be routed to

appropriate areas of the facility. Going further, plans should be made for uninterrupted power sources or backup generators. Regardless, rest assured that according to Murphy, and despite all planning, power failures do occur in ways unforeseen. We do not know how the stray cat maneuvered its way undetected into the power room, we merely know that its curiosity for knowledge about the electrical requirements of a modern library proved the old adage "curiosity killed the cat." Curiosity also killed power in half of the building, and of course it was the half of the building that reference inhabits. What do you do in the electronic library of the future when the power goes out? If you have anticipated the unlikely occurrence you might a) have the L.C. Subject Heading books close at hand, b) have multiple copies of the L.C. Classification Outline handy (or in user-speak, "you know, those thin blue pamphlets"), c) call the catalogers up to the service points, and d) have Andriot and the Subject Bibliographies close by. This unfortunate tale points out the need for plans to take care of patron needs when the power goes out. You won't be able to tell them if the document has been checked out, but you will be able to direct them to appropriate material.

Will all "H" card holders please stand and adopt the traditional "hear no evil" pose? For the hearing impaired patron, how many of your facilities will have an interpreter on staff or someone who knows the manual alphabet? How patient and persistent are your front line staff in assisting the hearing impaired, someone whose speech is difficult to understand because of an accent, or who "just - does - not - speak - with - the - enunciation - and - grammar" to which you are accustomed? "H" card holders please be seated.

Prophylactic measures or, practicing safe computing

There are some scary viruses out there in the electronic age. You are providing patrons the ability to electronically go traipsing all over

the world. You don't know who they've been FTP'ing with or where their disks have been. What is a concerned facility to do? Institute virus scanners on all workstations. If your computers are on a network, periodically rebuild the machines. For our safety and that of our patrons we rebuild machines several times a day by inserting a special rebuild disk. The rebuild disk completely reformats the computer hard drive, then pulls all necessary files off of the network server. Depending on network load the rebuild process takes 12 to 18 minutes. As an added benefit to the rebuild process we no longer restrict patrons from downloading to the hard drive because at least once a day the drives are cleaned off. With these measures you can help protect yourselves and your patrons.

"M" card holders, in the words of Steppenwolf, "get your motor runnin'." Please come down front, I have special seats reserved for you. To get here please use the aisle furthest from you. We understand that as representatives of the mobility impaired it sometimes takes you longer to reach your destination, or that you sometimes require assistance to reach items on shelves. Or retrieve printouts from printers placed up on tabletops. We will be patient. Oh, we have a problem. There are more of you than there are accessible stations. I'm sorry, we did have more but someone without an impairment is using the space. Excuse me, but you will need to relinquish this/these station/s. Our policy and signage clearly states that special needs patrons have priority using this/these station/s.

Site visits or, it's amazing what you can see if you just look

In a non-traditional sense, site visits are where you find them. Anywhere you happen to be and where technology is can be a site visit. For example, while at a conference you have to make an emergency trip to the dentist. In between grimaces of pain notice the computer setup in the dentist's office. Does the furniture accommodate the hardware adequately? Is that the type of monitor you

are thinking about purchasing? Didn't that laser printer make short work of printing out such an extensive bill? The point is to be aware of the technology around you in everyday situations and make use of the information. When planning a facility, visit as many library sites as you can, and choose sites with varying degrees of technology implementation, and a variety of systems. There is a lot to learn from approaches taken by institutions that are different from yours as well as those that are similar.

Another place for diversity in site visits is in the composition of the site visit team. In the three years since our new building opened we have literally had hundreds of site visits, official and unofficial. Most of the groups I have seen visiting the library or have taken on tours have been fairly homogenous: the senior managers will come, reference librarians will come, an occasional collation of catalogers will visit. Rarely will a cross-section of these groups come together. You have to wonder, don't they like each other? Also, where are the support staff? Where are the users? Be inclusive. Insight lives everywhere.

Some of you received cards with a "C" surrounded by the international "not" sign. Please stand. The symbol doesn't stand for "no copyright infringement allowed." Instead it symbolizes users who have little or no computer experience. They might be a returning adult student, Theresa Q. Public, or just someone unfortunate enough not to have the means to afford what many of us are taking for granted as common appliances. These users too have special needs deserving consideration in your planning process. Someone at the "What is a mouse and how do I use it?" level will be completely lost when you cheerily inform them that all they have to do is do a Web search, FTP the file, (the one in spreadsheet format, not the text file) import it into Lotus 1-2-3, and maybe send a copy to the network printer. Yes, over time there will be fewer users at this level, but we aren't there yet. "C" card holders, be seated.

While planning for the technology, plan for the training

The multiplicity of interfaces and constant rounds of the upgrades and enhancements game argue strongly for constant, continual training of staff and patrons in the electronic age. In your planning process consider where and when the training will take place. Will there be a separate training room, or will the installed base of equipment have to be taken over for any training session? Is specialized equipment needed for training? Who will conduct training sessions? How will training on the electronic resources impact training for the print resources? How will you handle patrons with varying skill levels? The training needs and approaches are vastly different for a returning adult student and an engineering graduate student.

You have been lied to for years. Size does matter, and I will show you why. [OVERHEAD, electronic classroom 0106, side view] This side view of our electronic classroom shows the 17 inch monitors, which is not an uncommon size for monitors these days. If you look closely you will see the CPUs are positioned vertically on the floor. Even with this accommodation it is difficult for patrons to see the instructor, the front of the classroom, or the projection screen over the top of the monitor. [OVERHEAD, electronic classroom 0106, front view, patron peeking over top of monitor] It is also difficult for the instructor to see the class. I shot this from the instructors' station at the front of the classroom. On a good day I'm pushing 5'10" tall. The person seated at the computer is 5'9" and as you see, her eyes barely clear the top of the monitor. Aisle width in a classroom or cluster is another concern where going with the accepted standard may not be enough. [OVERHEAD, electronic classroom 0106, side view] That chair is positioned at the distance of a seated person. Imagine all of the stations filled. How would you get in to help with a problem? Does your mental image get more claustrophobic when you add in winter coats, backpacks, purses, etc.? Another size issue

involves cord length. For your installation does the standard cord or cable length permit the pieces to move freely without unplugging the equipment? If not, get longer cables. I've been approached at the reference desk by patrons who swear the equipment is broken, when all that has happened is that monitor cable unplugged itself when they swiveled it to get a better viewing angle.

As I mentioned earlier our electronic reference room is just a few feet on the other side of our reference desk. The glass wall facing the desk is thirty feet long, with a door in the middle. Our reference desk just happens to have a thirty foot long front with no opening in the front of the desk. I'm sure the architectural profession appreciates the balance and symmetry this arrangement represents. Architects don't work in libraries. Patrons frequently have problems requiring assistance in the electronic reference room - problems with the software or interpreting screens, paper jams, the printer is out of paper, or which one of the laser printers did my printout get routed to? So we stand, proceed fifteen feet to the end of the desk, fifteen feet backwards to clear the side extension, turn the corner (two feet), fifteen feet forward this time, turn, fifteen feet forward to the doorway, "Now, how may I help you?" Reverse. Repeat. Many times a day. You do the math, then tell me size isn't important. That is a lot of territory to cover in providing assistance. The solution is to place an opening in the front of the desk. Because of the construction of the desk and the power and cabling considerations the latest estimate I have heard on the cost of this surgery was \$7,500.

Will everyone who received a card please stand one more time. Thank you for assisting me today. Ladies and gentlemen, look once again at this cross-section of your users. When you have the temerity to plan high-tech facilities for the electronic age, by all means maximize the technology available, innovate, and try new combinations. But in your planning you had best remember these people and their needs in the electronic age. If you do, your facilities planning for people in the electronic age won't be a Titanic disaster.

Purdue University's WWW GPO Access Gateway: Origins and Evolution

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Information plays an increasingly important role in domestic and international affairs. An article in a recent issue of *Foreign Affairs* described this development as follows:

"Knowledge, more than ever before, is power. The one country that can best lead the information revolution... for the foreseeable future... is the United States. America has apparent strength in military power and economic production. Yet its more subtle comparative advantage is its ability to collect, process, act upon, and disseminate information, an edge that will almost certainly grow over the next decade. This advantage stems from Cold War investments and America's open society, thanks to which it dominates important communications and information processing technologies—space-based surveillance, direct broadcasting, high-speed computers—and has an unparalleled ability to integrate complex information systems."¹

GPO Access represents just one example of American information technology expertise. Since its initiation as a result of Public Law 103-40 in 1993, the number of depository libraries offering the GPO Access service to Americans has gradually increased. Initial development of the database by GPO and depository libraries used the WAIS (Wide Area Information Server) search engine.

While useful in some respects, WAIS searching is intrinsically clumsy and of undependable precision. WAIS' utility has also diminished with the rise of more user-

friendly Internet search mechanisms such as the World Wide Web browsers Lynx and Netscape.

Seeking to improve the efficacy of databases such as GPO Access to a larger variety of library users, some depositories began to look to providing a Web search interface to GPO Access. One of these depositories was Purdue University. Purdue University is the land-grant university for the State of Indiana having served as a Federal depository since 1907. Possessing a decentralized library structure as a result of institutional history and practice, Purdue's library system consists of 15 school and departmental libraries many featuring significant depository collections based on the collection development policies of their respective libraries.

While such decentralization has worked relatively well for university library service, it makes efficient access to government information challenging with users potentially having to visit several libraries to get desired government information. The desire to provide more efficient access to information by Libraries Administration helped stimulate interest in GPO Access at Purdue.

Another factor prompting the decision to set up a local GPO Access gateway was the influence of the Purdue's Division of Sponsored Programs. This organization supports faculty efforts to obtain funding for teaching, research, and service activities including those provided by Federal agencies and announced in the Federal Register.

Purdue Libraries and campus subscribers to the paper edition of the Federal Register receive this approximately a week after its publication. In the increasingly competitive world of seeking Federal grant appropriations a delay of even a week in submitting an application can be injurious to university, departmental, or individual efforts to obtain important research funding. This factor helped lead the Division of Sponsored Programs to approach Purdue Libraries to express interest in developing efficient electronic access to the Federal Register.

The decision to become a GPO Access gateway was made shortly after my arrival as Documents Coordinator in January 1995. Primary implementation of this work was handled by Purdue's Network Services Librarian Carl Snow and Cary Kerr of Purdue Libraries' Information Technology Department.

Kerr worked off and on for about 10 hours per week from March to May 1995 on Access implementation. He first used software from the Nordic WAIS/WWW project located at Denmark's Danish Technical University to serve as a basic Web to WAIS gateway.

He proceeded to make changes to accommodate GPO's presentation of data such as presenting summary, full text, and Portable Document File (PDF) versions, allowing for inline graphics and minor formatting changes which proved to be a fairly simple process. GPO help files were also adapted to Purdue Libraries' software.

Following this work the formal announcement of the Purdue University GPO Access gateway was made on May 23, 1995. A public demonstration was held in the Purdue Libraries Electronic Classroom for local media including the Purdue University News Service, Purdue's student newspaper The Exponent, the Lafayette Journal and Courier, and WLFI-TV, the local CBS affiliate. WLFI's coverage showed a live demonstration of GPO Access and featured the URL <http://thorplus.lib.purdue.edu/gpo/> at the

end of their story. News of GPO Access' availability on the Web was also distributed to a number of listservs, including GOVDOC-L and LibRef.

The response to and use of GPO Access has been gratifying. Approximately four trillion bytes of government information (many from GPO Access) pass monthly through Purdue computers. Use statistics for March 1996 reveal access from a variety of domestic and international domains plus 40,118 files retrieved from 37,034 GPO Access searches.

A personal concern I had prior to setting up GPO Access was how much time I would have to spend answering questions. I was genuinely worried that the amount of time I'd have to spend answering questions would drastically reduce the time I could spend on other important work which we all face as depository librarians. Fortunately, I have not been overwhelmed by user assistance demands. I generally answer 4-6 GPO Access reference questions per week by e-mail, most generally requiring only minor corrections in search strategy or syntax structure.

This user friendliness is attributable both to the high quality work of Access compilers and maintainers at GPO and from the work of Cary Kerr and Carl Snow in designing a user-friendly search engine.

Serving as the principal public contact for GPO Access has given me the opportunity to answer a number of interesting reference questions and interact with individuals all over the world. Two of the most rewarding experiences I've had were helping foreign users of GPO Access. One of these was an individual from Melbourne, Australia requesting information on a Social Security treaty between the U.S. and Italy. The other involved helping an official in the Chilean Health Ministry find dietary supplement labeling information from the Federal Register.

When you set up an electronic information service such as GPO Access, user support

personnel should also expect questions from individuals looking for information that is not in GPO Access nor likely to be in any current or future electronic government information source. The best example of this I've encountered came from a user who thought Access would feature information on a relative who was a Tennessee State legislator in the early twentieth century. I was able to refer this individual to more appropriate print sources.

Individual librarians should also determine how much time they're willing to assist patrons outside their immediate geographic area with GPO Access inquiries before referring them to other Access gateways or depository libraries closer to their respective locales. User support personnel also need to recognize that many Access users are not comfortable with WWW search strategies and may require additional time and patience to assist effectively.

Establishing a GPO Access gateway at Purdue has been a beneficial experience institutionally and individually. Purdue University Libraries are proud to be the first depository library to bring up GPO Access via a World Wide Web interface. Credit for this goes to the skill of Cary Kerr and Carl Snow as well as the essential support of Libraries Dean Emily Mobley.

Producing a GPO Access gateway has also produced much positive publicity for university libraries and prompted many depositories to contact us for source code and other technical information on GPO Access which we have freely distributed.

We have succeeded in increasing public access to government information and work diligently to keep up with the challenge of the continually increasing lineup of Access databases.

GPO Access is promoted through bibliographic instruction to a diverse variety of classes and contact with individual users whose information needs can be met by Access contents. Demonstrations of Access have been given for Indiana University library personnel and for INDIGO (Indiana Networking for Documents and Information of Government Organizations), Indiana's equivalent of GODORT.

GPO Access has proven to be a user-friendly database that has not caused undue hardships on my work time and given me the opportunity to promote Purdue Libraries and the valuable role of government information to individuals and organizations who might not normally consider such information useful or important.

While there are technical, fiscal, and personnel resources involved in the establishment and maintenance of a GPO Access gateway, proper planning and administrative support can make it a successful venture for those libraries choosing to take part in this experience. Those choosing to take this step will find it to be personally and professionally rewarding as we operate in an increasingly electronic environment of government information dissemination and delivery. Taking this step can also demonstrate the wise use of fiscal and personnel resources to those responsible for funding our respective institutions during this era of fiscal restraint.

1. Joseph F. Nye, Jr., and William A. Owens. "America's Information Edge," *Foreign Affairs*, 75 (March-April 1996): 20.

GPO Access Gateway at Case Western Reserve University

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Case Western Reserve University (CWRU) became the 8th Government Printing Office (GPO) Access Gateway in March, 1995. The process of opening the gateway was the outgrowth of a set of cooperative efforts and agreements that are reflective of the networked environment of the CWRU campus, an illustration of the effect of the developing networked infrastructure on library services and decision making.

Initial Steps

With the passage and initial implementation of the GPO Access legislation (P.L. 103-27), Federal depository libraries were given the opportunity to have a single free connection to the server running the mandated databases. At the time of the initial registration and rollout by the Office of Electronic Information Dissemination Services of GPO (late summer of 1994) there was already unofficial word that GPO would work toward expanding access through "gateways" in a short time. Within weeks the Library Programs Service issued a call for potential gateway sites and began providing additional free logins to the system, up to a total of ten per depository, for gateway libraries.

The Electronic Learning Environment at CWRU

Case Western Reserve University operates a high speed fiber optic network, CWRUnet, which connects virtually every classroom, laboratory, office, and residence hall room with a suite of services maintained locally and

around the nation and world. Every student, faculty member, and staff person has access to libraries of software, servers with nearly 100 CD-ROM titles, the integrated library system, electronic mail services, Usenet access, a campus-wide and community-wide information system, shared computing resources, and administrative data, among other resources. Within this environment, the libraries of the campus have moved aggressively to integrate electronic and traditional resources into library services.

Over the past two years, for example, collection development policies within the University Library (the general library for Humanities, Social Sciences, Science, Engineering, and Business) have been extensively revised to incorporate digital format and campus wide availability as factors in building subject area collections. Computing resources are directed at networked applications rather than stand-alone workstations, thus it has become the practice (and a *de facto* policy) that electronic products be evaluated for their networkability: sources that must run on a single machine in a single location are not selected unless they provide absolutely essential information not available in another configuration or format, and the cost of licensing must become a factor in the price of a given resource.

Within this context, the GPO's initial rollout of the single user connection to the GPO Access server was disappointing at the least, since the single remaining stand-alone workstation for CD-ROMs in the Government

Documents Department was entirely stand-alone, without a connection to the campus network, and since networked machines in the public areas are protected by a secured menu system which prevents users from reaching a wide-open connection to the Internet.

Opening the Gateway

The rapid expansion into the Gateway project fit with the University's goals and practice immediately and without question. This fit was such that there was no need for extensive policy discussions about CWRU's participation as a gateway. The resource was evaluated by the appropriate selector (the documents librarian) on the basis of the criteria set forth in the collection development policy, and was added to the library collection (in this case the virtual collection available online) on the merits of those criteria and the ability to make the service widely available.

Because all campus libraries (including health sciences, law, and social work) share in the use of the campus network, a committee composed of representatives of those constituencies, as well as from the system support office (Library Information Technologies) convenes to make decisions on selection and deployment of campus-wide resources. The GPO Gateway proposal was taken to this body, the Networked Resources Committee, as a joint effort of the University Library and Law Library, and was immediately and unanimously endorsed for inclusion.

In the course of that selection process, system support personnel were brought into the process to advise on technical concerns. Both modes of connection to the GPO server were examined, and the viable route was found to be SWAIS, owing to limitations imposed by the incompatibility of the Windows-based local client WAIS software and CWRU's network software, and the inability of the GPO WAIS server to accommodate connections from distributed IP addresses. The second depository on the campus, the

School of Law Library, was brought on board at this point as well, contributing to the total pool of available logins from their allotment of 10.

The choice between "full" (local client) WAIS service and SWAIS was radically altered by the introduction of the Gateway project. With the information supplied for the initial rollout, local client WAIS had the advantage of fuller functionality in terms of its graphics transfer capabilities. When it became clear that SWAIS was the only viable option in the existing range of choices for implementing the gateway, a closer look revealed that SWAIS is functionally quite powerful and is not a pale second choice to the full WAIS option. In terms of clarity and relative ease of use, SWAIS has, in fact, some definite advantages, not the least of which is its display of the list of databases to select from at the outset of the search, and the less "busy" appearance of the screens.

The continuing concern for graphics transfer capability led to the decision to retain a local client WAIS connection in each depository (University Library and Law) devoting the remaining 18 simultaneous connects (9 from each) to the pool. Users are instructed in help files now under development that if the graphic element missing from the ASCII text version over the network is required, they must contact the documents librarian at the Law Library or University Library, who will then secure the appropriate page(s) via either WAIS or the printed copy.

The timing of GPO's rollout was fortunate in that within the same month that the call was put out for Gateway volunteers, CWRU began beta testing for a new release of integrated library system software for its vendor. Included in the release was a feature (named, awkwardly enough, "gateway") that allows connection to remote hosts from the OPAC by means of scripted logons within the front end of the online catalog system. Thus a user now looks at the first screen for EuclidPLUS, the library's system, and chooses between the OPAC and a menu of other remote sources

and databases including GPO Access. Upon choosing GPO Access, the connection is made seamlessly, with login and password hidden from the user.

The linkage of the project to the integrated library system was a desired outcome of the approval process by the Networked Resources Committee. By placing the service "in the mainstream," users benefit immediately from a cleaner interface and fewer points of entry to library databases, and in the long term from ongoing improvements to the integrated system extended to all services under the OPAC umbrella.

The single longest delay in the process, and that with the thorniest issues surrounding it, was a debate which developed while the testing of the new system software release was underway. For various reasons of security to the campus network, it was decided that there would no longer be the possibility of a totally anonymous remote connection to the CWRU system. Up to that point a dial-in user could connect to the CWRU computers, and using a default login and password, gain limited access to public databases such as the library catalog.

With concerns for network security growing across the country, a campus-wide discussion resulted in this free access being cut off, thus cutting off public users of GPO Access. After further discussions and consultations, a solution was proposed that allows free public access through the Cleveland Free-Net, a community network which operates from the CWRU domain, which registers users without charge and provides them with a wide range of services and information. CWRU users and external users, whether over the Internet or via the Free-Net, now see parallel OPAC front ends, with a wider range of options available to CWRU users, but with the library catalogs, GPO Access, and a CWRU-produced database of local and regional economic and demographic data available to everyone.

Much discussion has taken place in the depository library community regarding the provision of access to government information online to users at the so-called "low end," that is, without direct network connection, coming on through modems and telephone lines. It was with these users in mind that the search for a solution to the question of security and access was sought and ultimately found.

Although the service is in its first weeks of normal operation as this is being written, and very little publicity has taken place either on the CWRU campus or in the community, the first full week of service saw nearly 140 connects to GPO Access, a larger number than to several other popular databases including OCLC Worldcat. The strategy in promoting the service will be to promote in such a way that we build a core of "power users," who will be comfortable with the software and adept at performing useful searches. To that end reference librarians are currently being trained, and a series of workshops focusing on the individual databases within GPO Access are scheduled, with key user groups on campus targeted. We will, at the same time, inform our community of the availability of the resource and the assistance available from library staff in using it.

While the WAIS interface is not a popular favorite among librarians on this campus, and the databases remain somewhat idiosyncratic, the introduction of the GPO Access program has brought government information a great leap forward in the electronic learning environment on this campus, and has demonstrated in microcosm the emerging models for building and maintaining collections in the library of the future.

GPO Access, WAIS, via the WWW at Oklahoma State University through Oklahoma Gateway

Suzanne L. Holcombe
Oklahoma State University
Stillwater, OK

Overview

Oklahoma State University (OSU), a State university of close to 20,000 students, is one of two regional depositories in the State of Oklahoma. The other regional is the Oklahoma Department of Libraries at the State Capitol. OSU was the most equipped at the time, to step forward and plan a gateway.

In August of 1995, we set up our first gateway. I decided to go the way of the WWW since there were already a number of SWAIS access points available and few on the Web. Our campus computer center (Computing and Information Services, from now on CIS) also had reservations about users dialing in, our library had concerns about adding another database to our online catalog system and SWAIS was difficult to use at times. We did have the WAIS software set up in our documents office.

I approached the person at CIS who was the OSU Web site's Webmaster. We discussed the idea and initially decided on the following:

On the Computer Center's IBM RS/6000 running AIX, (IBM's version of UNIX), we set up `www.wais.c`, v. 2.5 , a small ANSI C program for use on the WWW (acts as a gateway between programs that create indexed catalogs of files and a forms-capable browser). The searches and results produced were fine and timely, but we were not able to

access GPO's .PDF files. We believe this to be due to the version of freeWAIS (v. 2.02) it was working with. The person at CIS who had helped me to put this together left OSU for another position, so instead of trying to unravel his work, we decided in November/December of 1995 to change our setup.

I was now working with the person at the CIS who had replaced the Webmaster, but was no longer the Webmaster as this position had been moved to our Public Information Office. He and I, together with a CIS C programmer modeled our new gateway after that of Purdue University. Purdue has provided access to the programs they used on the Internet: `<http://www.lib.purdue.edu/gpo/GPOsetup.html>`.

The basic user format or style stayed the same. We have an introductory page which:

- describes GPO Access;
- offers access to GPO's home page and WAIS site;
- offers access to GPO's helpful hints for searching the WAIS databases, and
- offers access to Adobe site for downloading of the Adobe Acrobat for the .PDF files.

The second page of our site gives the actual database listing and basic search directions. It is set up as a Table with boxes to the left of the databases where users must point and click to make their selections. This works very well for now, and we are able to clearly describe the databases. Although as more and more databases are added, we might change our setup to something similar to what GPO has done or reorganize the Table so that users do not have to scroll through screens of pages to see all of the available databases.

From the Purdue site, we downloaded the following to the IBM RS/600 (and I am told that Xwindows must also be installed since the files below are in C. (Xwindows = graphical windowing system for the UNIX environment)

1. Downloaded the newer version of freeWAIS.
2. Downloaded Imagemagick, allowing for viewing of .PDF files.
3. Downloaded GPO Access gateway code file (.cgi), written by Purdue, to combine 1 and 2, above.

The above three files were first saved to a local drive and then FTP'd to the server. Some of the files have to be modified so that they match to the directories of the particular server being used. (The Make file (which actually writes the new program files after you have changed the defaults in the original template files) also needs to match the server.)

I have an ID and password from the Computer Center to access the server in order to edit the gateway screens. I use Pico, a UNIX editor.

A user counter has been added to the bottom of the page:

```
(<!--#exec cmd="/usr/cwis/etc/cgi-bin/access_count"--> as the number).
```

User Support Issues

I communicate to campus users via an electronic bulletin board on our e-mail system. I have advertised GPO Access WAIS in library newsletters, demonstrated it at conferences, legislative days, etc., to promote it statewide. My e-mail address is at the bottom of the page for user comments. Users need to be aware of the necessary search commands, Boolean operators in upper case, phrases in quotations, etc., but GPO's helpful hints are available and straightforward. (Bill Taylor from Georgetown has also put together a GPO Access Searching Tips which is very good too.) Overall, users are amazed and really pleased that this is available. They are waiting for the CFR however!

Why Set One Up

It has been said that GPO Access WAIS will be a main distribution point for electronic materials. We have enjoyed the experience of making something so useful and worthwhile available to our State users and others. We are grateful to Purdue for their capability and their willingness to share.

SWAIS Gateway: How to Set One Up, User Support Issues, and Why Join Up?

Ellen M. Dodsworth
Georgetown University
Washington, DC

I. Introduction

Our beginnings as a "Gateway" were very simple. The U.S. Government Printing Office was looking for a local area "Gateway." So Gil Baldwin, Chief of the Library Division at GPO, contacted Joan Cheverie, who is the Head of the Government Documents Department at Lauinger Library at Georgetown University. After much discussion with Mr. Baldwin and Lauinger Library's administration concerning technical requirements and potential impact on the library staff, Ms. Cheverie responded enthusiastically to the invitation of being a "Gateway" for GPO Access.

II. How Was SWAIS Set Up?

SWAIS was set up with the assistance of Lauinger Library's Systems Office. The library already had a Sun file server (SparkServer 1000). The department acquired a modem, a terminal server, and two pieces of software (tcl and Expect). Steven Jackson, the Head of the Systems Office at Lauinger Library, programmed the modem and terminal server and configured the software, which took approximately three weeks. At that time, the current version of our library's integrated library system, Innovative Interfaces Inc. or III, allowed users to connect to GPO Access by dialing in, logging in, typing a password, and typing a terminal emulation. This version of the system's software had connectivity, however it did not have the means for scripting. In addition, we were unable to improve the screen display. The words of the

text would wrap around the edges and it was difficult to read.

The next release of the III software (Release 9.0) allowed for scripted connectivity. Users could then go through our library catalog, but never see the log-in process because it had been scripted with a log-in. Our system has 3 modems and virtually unlimited telnet ability because the library has 90+ user licenses for III. In other words, at any one time 90 simultaneous sessions can be occurring on our library system.

Users can connect to GPO Access in one of two ways:

First, they can telnet to George at 141.161.93.5 and the log-in is "George."

Second, they can dial in at 202-687-6296 for 1200 baud or 202-687-1887 or 202-687-5967 for 2400 baud and the log-in is "George."

The basic equipment to connect to GPO Access through SWAIS is outlined in the "Recommended Minimum Technical Guidelines for Federal Depository Libraries" published in Administrative Notes, v. 16, no. 17, pp.19-21 (Dec. 15, 1995).

Steven Jackson wanted me to inform you that he would be happy to answer any of your systems questions regarding GPO Access (the SWAIS way). He can be contacted at 202-687-7617 or at <jacksons@gunet.georgetown.edu>.

III. How Is It Working Now? Positive Aspects, User Support Issues

How is it Working Now?

GPO Access has been working well. Steven Jackson provided statistics for me to share with you. He can only provide statistics which reflect the number of times our system was used to connect to the "Gateway." He cannot provide figures reflecting the number of searches nor the number of documents retrieved.

September 1995	228
October 1995	301
November 1995	519
December 1995	138
January 1996	260
February 1996	163
March 1996	346

Since we became a "Gateway" in late summer, we do not have a full year of use data available. Therefore, there is not enough data to make a significant analysis of the seasonal usage pattern. However, it can be assumed that the government furlough, poor weather, and the holidays accounted for variances in the monthly usage of our "Gateway."

In the first six months, the GPO Access Gateway has developed a loyal audience through Georgetown University. Steven Jackson informed me that GPO Access now constitutes five to six percent of all Lauinger Library's gateway activities, which is significant considering the number of gateways available at Georgetown University.

Positive Aspects

An outstanding feature of GPO Access is the continual growth of new information sources being made accessible through the service. Federal depository libraries are kept informed about new databases available on GPO Access through Administrative Notes. Also, the Library Programs Service of the U.S. Government Printing Office is making a great

effort to extend a helping hand for training. In Administrative Notes, v. 17, no. 2, pp. 13-14 (Jan. 15, 1996) there is an article entitled, "How to Request GPO Access Training or Demonstrations." This is a service which should be taken advantage of by libraries considering establishing a "Gateway."

User Support Issues

Our departmental phone number is made available to users who connect to our "Gateway." Many calls received have been questions regarding difficulty connecting to our system, for example, baud rate compatibility problems. Additionally, we talk users through searches over the phone. It is a consensus in our department that the manual for GPO Access is invaluable. Specifically, what makes the manual so useful are the examples of search strategies given for each database on the service. User assistance is also available from the GPO Access User Support Team:

Phone: 202-512-1530
 Fax: 202-512-1262
 E-mail: gpoaccess@gpo.gov

IV. Conclusion: Why Join Up?

The "Gateway" libraries who provide GPO Access through SWAIS provide an important service. We enable those individuals who do not have Internet access to locate government information. We increase exposure for the U.S. Government Printing Office. We provide technical assistance to users. But most importantly, we make access available to a wider population, therefore improving public access to government information.

Too Many Sticks, Not Enough Carrots: Implementing an SWAIS Gateway

Debora Cheney

The Pennsylvania State University
University Park, PA

The Pennsylvania State University Libraries became the fifth gateway library in January 1995. The process of making the gateway access available was relatively straightforward and ultimately successful, taking place in a little over three months from the original proposal to its availability on the Libraries Information Access System (LIAS). However, I learned along the implementation road that:

- Internal partners were a necessary part of the implementation process;
- Role of the partners affected the implementation process and ultimately has affected future development;
- Bringing up a GPO Access gateway in an organization such as ours has built in "sticks" that make operating within a partnership arrangement very difficult.

My experience has also led me to conclude that since GPO Access has now offered free access to GPO Access, that changes should be made in how gateway libraries are implemented and conceived, if the program is to continue strong and viable. Essentially, GPO Access Gateways are the right idea. They seek to provide access to low-end users; they use depository libraries to provide that access and the necessary support; and they encourage partnerships to establish a gateway. But within these "right" ideas are some implementation "sticks" that make it very difficult to effectively implement a gateway and to ultimately achieve access for low-end

users and increase access to government information overall.

Internal Partners

One of the most difficult "sticks" is the need to develop internal partnerships while having very little that you can bring to the partnership. At the Pennsylvania State University Libraries several key groups and individuals were required to implement the GPO Access gateway via the LIAS Select menu:

Dean of Libraries: approved the proposal to become a GPO Access gateway, decided how many passwords would be implemented, and where the gateway would be listed on the Library's Information Access System (LIAS) Select menus. Her support was instrumental in ensuring that the implementation moved forward quickly and with relatively little delay.

Library Computing Services (LCS): is responsible for the computing resources used by the library. They program and provide technical support for the Library's online catalog. The head of LCS reports directly to the Dean of Libraries. Ultimately, they were responsible for the programming required to make LIAS seamlessly connect to GPO Access and for its listing on the LIAS Select menu.

Computer-Based Resources Services Team (CBRST): works with LCS to ensure that databases are implemented in a timely manner. CBRST staff coordinate the scheduling of staff training prior to the public release of any database, oversee the development and production of user aids in a standard format, and generate library-wide publicity and information about the database.

The U.S. Documents Librarian: is considered the "local" owner of GPO Access; works with CBRST to provide staff training, text for user aids and press releases. The U.S. Documents Librarian also works as a coordinator between GPO and LCS to provide the technical information need by LCS to implement the gateway. The U.S. Documents Librarian continues to serve as the main resource person to answer any technical questions by the staff or public and coordinates future changes in user aids, training, or menu listings.

The U.S. Documents Librarian brings to the partnership:

- Desire to create access to government information through an interface that few people can figure out how to use;
- Little technical help or support from GPO;
- A project that could potentially overwhelm our already limited resources (people, hardware, software).

As a result, any partnership may involve spending a lot of time selling (the idea of an database gateway that is available to the "entire" world, not just our primary users, or even our congressional district), negotiating (whether to implement 10 passwords or 3), and being dependent upon intermediaries (CBRST and LCS, for example, who control computing resources) who don't necessarily have the commitment to providing access to

government information that the GPO Access Gateway project requires for successful completion.

GPO Access Sticks

In hindsight, there were three basic GPO Access sticks:

- The inherent conflict between the need to protect the low end user and the need to serve primary users;
- The lack of a user-friendly interface and product recognition;
- The need to rely on a great deal of "local" resources, while GPO essentially served as a silent partner.

From LCS's perspective, GPO was providing access to information available elsewhere (via commercial services and Thomas, which they better understood). In addition, GPO Access included a bad interface (from their perspective few users would be able to use it very well; Thomas was better) and it would take both staff and computing resources, possibly to the degradation of services they were committed to (such as our Z39.50 databases). The only thing the GPO Access Gateway had on its side was that Penn State would be one of the first libraries to use this gateway approach and the Dean of Libraries was committed to the project.

Today, in order to implement a GPO Access Gateway a library must have a high level of support from the library's top management; it must be willing to devote a great deal of staff resources to the effort; it must be willing to commit computing resources beyond those necessary to serve just its own clientele; and it must be willing to implement a user interface that is less than desirable to information they may already be providing access to via a commercial source such as Lexis or Legi-Slate. Only the most altruistic and well-endowed (in staff, computing, and economic resources) will be able to take on this role. On the other hand, GPO could find

ways make every library want to be a GPO Access gateway. Ultimately, the access to government information would be better and ultimately, everyone would benefit. In order for the GPO Access Gateway project to remain viable, some of these sticks will need to be converted to carrots.

Changing GPO Access Sticks into GPO Access Carrots

Here are some carrots GPO could offer to GPO Access Gateway Libraries to give some value back to the library:

- Protect the low-end user, but find more creative ways to do so.
 - ▶ Create "virtual" gateway libraries in EVERY library
 - ▶ Let every library serve its primary users
 - ▶ Provide an 800-number for SWAIS dial in access

Libraries need and want to be associated with high-end technology, not bad interfaces and what appears to the user (and librarians) to be outmoded systems. Users have always had to come to libraries to use government information. Is it unreasonable that they come to libraries (or schools or post offices or shopping malls) (especially if there are more of us) to access government information via in-house computers?

More people still have cars and access to public transportation than to a personal computer in most areas in the U.S. That will continue for some years yet. GPO Access in every library should be a GPO goal. GPO needs to recognize that more (libraries, in this case) is better and that an electronic FDLP will extend outward, to what has been called "virtual depositories."

- User Friendly - Product Recognition
 - ▶ Develop a single user-friendly forms-based interface that EVERY library can link to or install on their own server
 - ▶ Provide a logo that libraries can use to identify themselves as GPO Access gateways on screen and in the library

Currently every gateway library listed on the GPO Access home page has devoted some level of staff, computing, and other library resources to create a forms-based interface to GPO Access databases. At the very least, GPO should be the consultant on how to develop these interfaces and the source of recommended .cgi files.

However, if GPO's forms interface were better designed, would libraries continue to do this, especially when it means creating partnerships with reluctant technical staff? Apparently, some documents librarians are proving successful at convincing their top management that they can do a better job. That's great, but if the GPO interface were better would these libraries commit their resources in this way? Even if they would, libraries that can't convince their library to commit such resources (or don't have the resources to commit) would have access through a site that wasn't associated with another library.

In addition, each library doesn't have to refer their user to another library (it's just not great to tell Penn State students that Purdue's site is better than ours, so use theirs). Also, let documents librarians focus on "teaching" users how to use GPO Access content, rather than on trying to develop the best forms interface. A good interface also begins to compete with services like Lexis/Nexis, Legi-Slate, CQ Washington Alert. If you could tell your director that you could cancel your Legi-Slate subscription, because the WWW could now provide access, you

would have "something" to bring to a partnership.

If, in addition, GPO would have a single "face" instead of many different faces would libraries be more willing, and users more able, to find its site? Product recognition is part of reaching your market. Thomas is recognizable, no matter how I get to it—is GPO Access?

- Take the "local" out of local access—case being a silent partner
 - ▶ Encourage EVERY library to bookmark/link to GPO Access.
 - ▶ Reduce the local "overhead" on development and implementation by providing .cgi files to ensure a standard interface.

Currently, GPO Access gateway implementation is largely a local project. The depository librarian is encouraged to create partnerships, to gain support from top management; guide development; and provide all subsequent support, mentoring, and vision. It's a relationship only the most hardy (some might say foolhardy) document library and documents librarian will undertake.

GPO remains a largely "silent" partner in this process. Just as it did in the days of print and microform distribution, GPO acted behind the scenes to obtain, catalog, and distribute government information.

Yet, if GPO believes that libraries are to provide local access to GPO's centralized archival and storage function, libraries will need to know that what they gain from this partnership with GPO is more access, not just more frustration and expense. GPO needs to stop being a silent partner and to provide access to government information. If GPO does that, and does it well, the libraries will come, as will the partners, the necessary computing resources, and the support.

Conclusion

A mixture of cooperation, coordination, flexibility, and innovation... can extend GPO Gateways—Gil Baldwin

Being a gateway library has been a good experience overall. Being a gateway library gives a depository librarian an opportunity to work with new partners and to provide access to information that many libraries have not ever been able to afford in the past.

However, if the number of gateway libraries is to continue to grow, libraries are going to need a well-designed interface, additional help with the implementation process, and a willingness to recognize that libraries (even depository libraries) have primary and secondary users. In a networked environment, "local access" for the low-end user can be achieved in many different ways. Greater cooperation, coordination, flexibility, and innovation, as Gil says, will find ways to extend the number of GPO gateway libraries and achieve local access for the low-end user.

Bureau of Economic Analysis Gross State Product

George Downey

Bureau of Economic Analysis
Washington, DC

Gross State Product (GSP) is an annual estimate produced by the Regional Economic Analysis Division at the Bureau of Economic Analysis. GSP, which is the market value of the goods and services produced by the labor and property located in a State, is the State equivalent of U.S. Gross Domestic Product (GDP). Thus, GSP is not simply a measure of total sales in a State, it is a value added concept equivalent to gross output (sales plus inventory changes) minus intermediate inputs (goods and services purchased from other industries or imported) used in the production of goods and services.

Although GSP and personal income estimates both include the income received by wage and salary workers and proprietors, the two measures differ in that personal income, measured by place of residence, does not include business sector contributions to a region's total economic output. However, like the State personal income estimates, Gross State Product estimates are consistent with the national estimates; just as State personal income estimates sum to U.S. personal income in total and by component, GSP sums to the U.S. GDP estimates in total, by industry and by component.

Variables, Industries and Years Estimated

Gross State Product estimates are currently available for the years 1977-1992 in both current and constant dollars. GSP is estimated for the following four income components at the 2-digit SIC level (61 industries):

- Compensation of wage and salary employees ("compensation");
- Proprietors' income with inventory valuation adjustment and capital consumption allowances ("proprietors' income");
- Indirect business taxes and nontax liability ("IBT"). (This includes about 50 individual taxes including Property, Sales and Federal Excise Taxes);
- Capital charges ("corporate income").

Data Uses

At the national level, Gross Domestic Product is used to address important issues on productivity, growth, and rising standards of living. GSP addresses identical issues for States. GSP estimates can be used for a variety of regional research and planning interests, including:

- forecasting regional growth and tax revenue associated with that growth;
- determining which States are the most productive and if the most productive are the fastest growing;
- determining which industries in a region are the most productive and whether those industries pay the highest wages;

- determining if the most productive industries are the fastest growing industries in either product or employment.

Data Availability and Sources

A new set of estimates for the years 1977-1995 will be released in the spring of 1997. These estimates will be consistent with the recently released National Income benchmark estimates. Subsequent GSP estimates, which are scheduled to be released in the spring of each year, will lag the current year by 18 months.

The Gross State Product estimates are available in the following formats:

- Diskette
\$40, to order call 202-606-3700
- REIS CD-ROM
\$35, to order call 202-606-5360
- STAT-USA online service
<<http://www.stat-usa.gov>>, for prices and information call 202-482-1986
- Economic Bulletin Board
for prices and information call 202-482-1986
- Survey of Current Business
May 1995 issue - summary data only.

Bureau of Economic Analysis Regional Projections

Donna Desrochers

Bureau of Economic Analysis
Washington, DC

Every five years the Regional Economic Analysis Division at the Bureau of Economic Analysis prepares a consistent set of geographically detailed economic projections within a national framework. These projections are used by Federal, State and local government agencies and by private organizations to analyze economic trends, assess demand for future goods and services, and to provide baseline estimates with which to compare policy forecasts.

Areas, Years and Variables Projected

The geographic areas projected include the United States, all 50 States and the District of Columbia, as well as the 8 geographic regions within the U.S. Projections are also prepared for 313 Metropolitan Statistical Areas (MSAs), 17 Consolidated Metropolitan Statistical Areas (CMSAs) and 172 BEA Economic Areas (EAs). On occasion, county projections are produced if an outside contract has been secured, however they are not a part of the regular projections cycle. The projections span 50 years and the 1995 set included projections for the years 2000, 2005, 2010, 2015, 2025, and 2045 (1998 is also published for some industries in the U.S., States and regions).

The variables projected for the U.S., States and regions include employment and gross state product at the 2-digit SIC level, earnings at the 1-digit SIC level, total population by three major age groups (0-17, 18-64, 65 and over), and total personal income by major component. The substate—or MSA, CMSA and EA—projections provide slightly less

detail; employment and earnings are projected at the 1-digit SIC level, and only the totals are projected for population and personal income. There are no product projections at the substate level.

Brief Methodology

The BEA regional projections are long-run baseline projections; changes in the business cycle are not projected. The projections are based on the assumption that past economic relationships will continue, and that the economy will remain at, or near, full employment. We do not assume any major policy changes during the projections period.

A "top-down" approach is utilized when preparing the projections, meaning that a national set of projections is prepared first, using data from other Federal agencies with expertise in projecting data at the national level, including:

- Census Bureau U.S. population projections;
- Bureau of Labor Statistics projections of non-institutional population, labor force participation rates, employment and output by industry;
- Energy Information Administration's mining projections;
- Congressional Budget Office's projections of the non-accelerating inflation rate of unemployment (NAIRU).

These national totals are then used as control totals for the subsequent State projections. Likewise, the substate piece projections (one or more counties in a state comprise a substate piece) are controlled to their respective state totals prior to summing the pieces to MSAs, CMSAs and EAs.

The BEA long-term projections model does not directly project absolute numbers. To ensure historical regional economic balances are maintained in the long-run, BEA projects linkage variables that fully realize the effects of a change in one variable on other variables in the local economy. The final step in the projections process is to solve the linkage variable equations for the absolute numbers.

Projection Uses and Data Users

The BEA projections are used by regional planners in both government and private industry for a variety of purposes. The projections began in the mid 1960's when the Federal Government undertook an infrastructure and water resource planning initiative. The projects that resulted from this planning, such as dams and major roads, had life expectancies of 50 years or longer; although many states already had their own set of projections, simply adding them up did not yield a reasonable set of national totals. As a result, a consistent set of long-term regional economic projections were produced to aid the planners in their decision making.

The first set of projections was published in 1972, then another special set was published in 1977 under contract with the Environmental Protection Agency (EPA). Since 1980, the projections have been published every 5 years. The 1995 State projections were released in August, 1995 and the substate projections in May, 1996.

Today, the projections are used in various projects and studies, including:

- Airport construction projects in Denver, Minneapolis and Salt Lake City

- State pollution projections (as mandated by the EPA)
- Water resource planning, dam construction
- Highway projects
- Marketing/Real Estate studies
- Plant location decisions
- University research.

Projection Data Sources

The BEA regional projections are available from the following sources:

1. U.S./Region/State projections
 - Publication available from GPO. (\$13, #003-010-00256-5)
 - Diskette, contains a Windows and DOS extraction program (\$40, to order call 202-606-3700)
 - Survey of Current Business (July, 1995 issue) - Summary data only
2. MSA/CMSA/EA projections
 - Diskette, contains a Windows and DOS extraction program (\$40, to order call 202-606-3700)
 - Survey of Current Business (June, 1996 issue) - Summary data only
3. All Projections
 - REIS CD-ROM (\$35, to order call 202-606-5360)
 - STAT-USA On Line Service
< <http://www.stat-usa.gov> >, for prices and information call 202-482-1986
 - BEA home page
< <http://bea.doc.gov> >
 - Economic Bulletin Board (for prices and information call 202-606-1986).

NOAA Electronic Products and Services

Dottie Anderson

Anna Fiolek

Doria Grimes

National Oceanic and Atmospheric Administration
Silver Spring, MD

Good afternoon, my name is Anna Fiolek. I am a Documents Coordinator and Cataloging Librarian at the NOAA Central Library. I am very pleased to have an opportunity to meet with you today and share some interesting information about NOAA and its electronic products and services. I am also pleased to introduce to you two of my colleagues: Doria Grimes, Chief of the Contract Operations at the NOAA Central Library, who will tell you about the NOAA's CD-ROM publications, and from the same Library, Dottie Anderson, Reference Librarian, who will present you the NOAA's services on the Internet.

NOAA stands for the National Oceanic and Atmospheric Administration, an agency within the Department of Commerce.

NOAA was formed on October 3, 1970, as a result of a series of decisions during the Nixon Administration that recognized the importance of the oceans and atmosphere to the nation's welfare and economy. NOAA is a young agency with a rich historic past. Its roots date back to 1807 when President Thomas Jefferson ordered a survey of our new nation's coastline. Just as the country has grown mightily since the early 19th century, NOAA's responsibilities have become increasingly wide.

On the National Ocean Service home page we can read: "At some point during your day you will come face to face with NOAA, although you might not realize it. NOAA conducts research and gathers data about the global oceans, atmosphere, space, and sun,

and applies this knowledge to science and service that touch the lives of all Americans every day. On the sea and in the sky, the NOAA scientists and forecasters are on the alert, scanning the oceans we rely on for commerce and pleasure, the skies we depend on for travel and protection, and the weather we can enjoy... or protect ourselves against" <<http://www.nos.noaa.gov>>.

NOAA provides these services through five major organizations:

National Weather Service;
National Ocean Service;
National Marine Fisheries Service;
National Environmental Satellite, Data and Information Service, and
Office of Oceanic and Atmospheric Research.

You might be interested in finding more information about NOAA's historical background and its offices via some of NOAA's home pages on the Internet. For that purpose here is a handy address:

<http://www.noaa.gov>

Some additional information is included in the packets that we made available for you at the display table.

NOAA marked its presence on Internet in early 1994 when many NOAA facilities developed World Wide Web home pages that provide environmental information and news of their activities, services and products.

NOAA's home page is an entry point for Internet users to a wide range of information about the agency's programs and data as well as a gateway to Federal, academic and other services. As of my last count there are over 200 NOAA home pages.

NOAA's home page links you to the NOAA Network Information Center. The Center provides access to the NOAA FTP server, and various Gopher pages (for example, weather/environment related, etc.)

NOAA's home page also provides ties to the NOAA Data Set Catalog, a forms-based tool that allows searching of publicly available environmental data held by public and private sources throughout the world. That service is provided by NOAA's EIS (Environmental Information Services) as a partial fulfillment of the agency's responsibility to archive and document environmental data. The data sources include descriptions related to climatology, meteorology, ecology, pollution, geology, oceanography, and remote sensing satellites. The wide variety of data and data sources described in this catalog make it a valuable multidisciplinary research tool for the scientist, educator, researcher, or any member of the general public.

Another interesting source of information about and by NOAA is its headquarters' library (the NOAA Central Library). In late 1994, the Library launched its own home page that over time developed into the design that you see today. The library's home page serves also as another gateway to the NOAA electronic resources. The library's goal is also to provide full text access to the NOAA electronic publications. The NOAA Central Library is located at NOAA's headquarters in Silver Spring, Maryland. That scientific library maintains a collection of more than one million books, journals, technical reports, microform documents, compact discs, and databases that support research in atmospheric sciences, fisheries, marine biology, meteorology, oceanography, and related disciplines.

The library currently receives over 300 active journal subscriptions, hundreds of technical report series, and hundreds of publications through the international agreements. There you can find significant collections containing climate and weather observations from foreign countries from the late 1830s to the present, a historical Coast and Geodetic Survey collection, begun in 1807, and proceedings of international meetings on meteorology and navigation.

The library also contains Special Collections where the historic material from the U.S. Weather Bureau, the U.S. Fisheries Commission, and the Environmental Data Service is preserved. The oldest book in that room is dated from 1483. It is a translation of a Greek work by Hippocrates describing how weather affects the human body.

The NOAA Central Library is one component of the Library and Information Services Division (LISD) which also manages libraries in Seattle, Miami and Charleston, SC. Even as we speak, LISD is signing a contract for an integrated library system that will link all of the NOAA libraries on an OPAC (Online Public Access Catalog). Our goal is that within the next six months, you will be able to access the NOAA library catalog on the Internet.

In September 1993, NOAA Central Library was designated as a selective Federal depository library, with 27% items selected on NOAA related topics.

Mrs. Dottie Anderson will present some specific information on NOAA electronic services and products.

This afternoon I'm going to tell you a little bit about each of the NOAA five line offices. They are the National Marine Fisheries Service, the National Ocean Service, the National Weather Service, the National Environmental Satellite and Data Information Service, and the Office of Oceanic and Atmospheric Research. I will just touch on

the very few of the electronic products available, for the list is endless and growing rapidly.

NATIONAL MARINE FISHERIES SERVICE

<http://kingfish.ssp.nmfs.gov/>

The National Marine Fisheries Service (NMFS) is dedicated to the management and conservation of commercial and recreational ocean fisheries. These fisheries provide an important source of food for the Nation, as well as thousands of jobs and a traditional way of life for many coastal communities. From the Gulf of Maine to the Gulf of Alaska, NMFS scientists and managers ensure sustainable fish harvests; they are the stewards of the Nation's living marine resources and their habitats. NMFS assesses and predicts the status of fish stocks, ensures compliance with fisheries regulations, works to reduce wasteful fishing practices, and promotes the growth of aquaculture. They recover protected marine species, such as sea turtles, whales, and dolphins, without unnecessarily impeding economic and recreational opportunities. NMFS develops and implements conservation and recovery plans and works to prevent species from becoming threatened or endangered.

Our first overhead for NMFS is their home page. As you can see they are celebrating their 125th anniversary this year. From this page, you can get to a list of the principal facilities, science centers, and regional offices around the country.

There are some reports available full text over the Internet. Two very popular publications that come out annually are "Our Living Oceans" and the "Index for Fisheries of the U.S." These are available both electronically and in hard copy. There is a list of NMFS technical reports available for ordering; orders at the moment have to be called in. Global Sea Surface Temperature Maps can be viewed also. From the NMFS home page, the viewer can link to other NOAA related sites and other oceanographic sites that might be of interest.

NATIONAL OCEAN SERVICE

<http://www.nos.noaa.gov/>

One of NOAA's five major operating units, the National Ocean Service (NOS) coordinates ocean services and coastal zone management programs throughout NOAA, and provides services, predictions and warnings, as well as maps, charts, and publications, to ensure safe use of U.S. marine waters and air space. It maintains the National Geodetic Reference System.

NOS carries out NOAA's responsibilities in marine environmental quality research, development and monitoring. It develops and manages programs in physical, biological, chemical, and geological oceanography required to provide ocean services, to access the marine environment, and to establish a scientific information base on which to support development of a national policy for oceans and their uses. NOS administers NOAA's coastal zone management, marine sanctuaries and estuarine research reserves, and related programs. It conducts national assessments of the use and health of marine resources, and implements programs for the development of ocean mineral resources and energy.

I'm going to give you an example of some products available from one of the offices in NOS. You can see that we can click on many different options from the home page of NOS. Today we are going to take a tour downstream to visit the Office of Ocean Resources Conservation and Assessment, commonly known as ORCA. ORCA provides information for decisions affecting the quality of natural resources in the nation's coastal, estuarine, and oceanic areas. This information ranges from strategies for oil spill response and short-term cleanup activities to the long term effects of national and regional management strategies on marine and coastal environmental quality.

As we go to the ORCA home page, you will see that the inquirer can find out about ORCA itself, access the ORCA database, and find out

about ORCA projects and products. From here we will go to "What's New?" and find out about the latest projects and products. This page lists publications available at the moment. The bold faced items are available electronically. The Coastal Trends Series is among the most popular. Several of the titles are "Selected Characteristics on Coastal States 1980-2000," "50 Years of Population Change along the Nation's Coasts 1960-2000," and "Coastal Wetlands of the United States." The Data Product Details and Order Forms allow you to order publications electronically by either downloading the products or having them sent to you.

ORCA also produces CD-ROMS. One of the newest is "Turning the Tide: America's Coasts at a Crossroads." It focuses of the Nation's coasts, which are under increasing pressure from economic development and human activities. It is designed for use in museums, schools, and exhibits, and makes full use of multimedia including video, animations, music and sound, and imagery. Another CD-ROM that was recently released is the "Analysis and Planning for Integrated Coastal Management." This CD debuted in October 1995 at a week-long United Nations Environment Programme conference on protecting the marine environment from land based activities. The conference was attended by delegates from over 300 countries. The CD contains imagery, video, and audio in explaining integrated coastal management.

NATIONAL WEATHER SERVICE

<http://www.nws.noaa.gov/>

The National Weather Service (NWS) is responsible for providing the nation with accurate and timely weather information for the protection of life and property. This includes severe weather, hurricane and flood watches and warnings, short term weather forecasts and long-lead climate outlooks. The NWS is in the midst of a massive modernization and associated restructuring program based on new technology and knowledge in the sciences of meteorology and hydrology. Recent advances in satellites,

radars, sophisticated information processing and communication systems, automated weather observing systems, and superspeed computers are the foundation of more timely and precise severe weather and flood warnings.

One area of the NWS is the National Center for Environmental Prediction (NCEP). Virtually all the meteorological data collected over the globe arrives at NCEP where they are analyzed and used to generate a variety of products that are distributed to NWS field offices, private meteorologists, the media, government offices, and the international meteorological community. Another center is the Climate Prediction Center which diagnoses and analyses climate and also generates climate predictions. The Center provides climate outlooks from 2 weeks to several seasons in length.

As you can see there are lots of offices under NWS. We will briefly look at the Office of Meteorology home page which is a recent addition. Here you can find information about ongoing significant weather events. There is a list of Publications and Resources. Two of them are The Aware Report (Warning Coordination and Hazard Awareness Report) and The Presto Report (Precipitation Summary and Temperature Observations for the Washington DC & Baltimore Area), which are available electronically. From the list of National Weather Service Publications you see a list of publications that can be ordered. Several are available full text online and the others can be ordered over the Internet.

Another page I wanted to show you is the Interactive Weather Information Network. This is one of the best pages for obtaining weather data. It is lots of fun to play around on.

NATIONAL ENVIRONMENTAL, SATELLITE, DATA, AND INFORMATION SERVICE (NESDIS)

<http://www.noaa.gov/nedis/>

NESDIS manages U.S. civil Earth observing

satellite systems, as well as global databases for meteorology, oceanography, solid earth geophysics, and solar terrestrial sciences. From these sources, it develops and provides environmental data and information products and services critical to the protection of life and property, the national economy, energy development and distribution, global food supplies, and the development and management of natural resources.

I'm going to tell you about two of the data centers under NESDIS.

The National Oceanographic Data Center (NODC) is the national repository and dissemination facility for global oceanographic data. It manages and distributes physical, chemical, and biological oceanographic data collected by organizations and institutions in the United States and dozens of other countries. Available is a list of NODC CD-ROM data products. In 1990, NODC launched a project to make its archive data files and other ocean data sets available on CD-ROM. NODC can provide customers with data selected from its archive data files on Write Once CD-ROMs as well as on magnetic tapes, diskette or over the Internet by FTP. There is also a list of publications that are still in print and available from NODC.

The National Climate Data Center (NCDC) is the world's largest active archive of weather data. NCDC archives weather data obtained by the National Weather Service, Military Services, Federal Aviation Administration, and the Coast Guard, as well as data from voluntary cooperative observers. NCDC also collects data from around the globe. This is the data center that produces the material we get the most requests for. All of the Local Climatological Data and State Climatological Data is produced from here. If you want to know what the weather was ten years ago, we can look it up for you. There are more than 200 major stations around the United States plus many smaller stations that are listed in the state material. NCDC also puts out many interesting publications such as "The Blizzard

of '96" and "Billion Dollar U.S. Weather Disasters 1980-1996." These are both available over the Internet.

OFFICE OF OCEANIC AND ATMOSPHERIC RESEARCH

<http://www.noaa.gov/oar/>

NOAA's Office of Oceanic and Atmospheric Research (OAR) looks at weather, climate, air quality, the oceans and Great Lakes, with an eye for better understanding the Earth's environment—everything that goes together to make our earth system. This leading edge research is carried out by NOAA scientists in a network of environmental laboratories and monitoring stations and alongside university researchers supported by NOAA through the National Sea Grant College Program and the National Undersea Research Program.

OAR conducts environmental research and develops technologies needed to improve NOAA services by studying the earth as a system extending from the surface of the sun to the floor of the ocean; improving environmental predictions affecting public safety and quality of life by using better observations, assessments and models; creating economic opportunities from the wise use of marine resources and providing the scientific basis for sound national and international environmental policy.

We will briefly look at just a couple of pages of their home page. The various labs are each represented here. The National Sea Grant College Program is a national network of over 300 colleges, universities, research institutions, and marine organizations that work in partnership with industry, the Federal Government, and State governments to support marine and Great Lakes research, education, and extension services. They have a national depository library in Rhode Island and the national offices are in Silver Spring. Another popular item produced by the Undersea Research Program is the Diving Manual. It is available from GPO.

What is Driving Federal Information Policy?

Patrice McDermott

OMB Watch

Washington, DC

My originally assigned topic for today was "Federal Information Policy", which seemed a little broad—like something you would take in college—and in twenty minutes, yet! I suggested narrowing it down to "What's Driving Federal Information Policy" and, while that is also way too broad for the time, I think we can walk through some of the forces that seem to be impelling the direction of the Federal Government's thinking on information policy. Maybe "impelling" is too strong a word. Some of the policy orientation does indeed seem "motivated" in the many meanings of that word, but some of it seems to be happening willy-nilly and without much forethought as to the implications, ramifications or repercussions.

It seems to me that there are five—maybe six—trends that are structuring the direction of Federal information policy. These are budgetary concerns, balance-of-powers issues, disintermediation, and two that tend to reinforce one another—lack of a broad constituency for information access concerns, and technological fascination. The possible sixth is disdain on the part of the cyberprivileged for those on the other side of the road (the information superhighway in this case).

Budgetary Concerns

No one who has paid an ounce of attention for the last six months or a year should be surprised here. The dominant rhetoric all-around is leaner, more efficient government. What better way to make government information provision less expensive—to government agencies—than to put it up online.

What wonderful cost-shifting that is: to the users and to intermediaries such as libraries. And, hey, it is not a tax or even a user-fee, because people can read it for free on the screen. In 1995, the House even passed legislation that would have effectively made bills, congressional reports and the Congressional Record available only electronically, by eliminating most of the printing and free distribution of paper versions.

In fairness to those agencies that are committed to getting the public's information out to them, it is an effective way to cut costs in light of shrinking budgets. And in the light of week-to-week Continuing Resolutions for many agencies, the public should probably be very thankful that this technology is at-hand. And at least the Federal Government is precluded from doing what a number of states are doing: charging for access to all their electronically-available information, other than legislative and a few other categories. If we have time at the end, I will tell you how I think that the way the public has been constructed as "customers" feeds into this trend.

Balance-of-Powers

This is a biggie for GPO and by implication for you here in this audience. The Clinton Administration, and others, are fixated on this issue of the legislative branch being able to tell the executive branch how to print (which tends to get blurred into what to print). A collateral issue appears to be the centralization—and one can read "in the legislative branch"—of information flow from

agencies to the public. When OMB Watch and the Public Access Working Group have spoken to OMB about the need for some way to track, give intellectual access to, and disseminate government information over time, they nod and say "Yes, that is a concern." But it is a problem for them that that repository (physical and/or virtual) may continue to be GPO.

Having said that, though, they appear quite happy for GPO Access to be doing GILS for many executive branch agencies. This may be because, as structured, GILS is a search and retrieval tool only. For the most part, it does not get you to the information itself (only to meta-information) and control of the information, access to it and its dissemination remains with the agencies. Unfortunately, so does responsibility to maintaining that information and that access over time.

Technological Fascination and Disintermediation

I want to consider these two together. As Bob Gellman correctly notes in his recent article in *Government Information Quarterly* (13:1), direct access to government information outside of the depository library system is expanding—for those with network access. For the cyberprivileged, there is, indeed, faster access to many important and useful sources of Federal information. The Federal Register is one source that comes immediately to my mind. I can tell you that, for the nonprofit community who have access to the Internet, this is a major event. Many people don't have time to go to their depository library, assuming they know what and where it is (a point to which I will return), so, to be able to access this crucial document online is a godsend.

But there is another side to this. The Federal Register is fairly easy to use, once you get the hang of it. Much of the information created and maintained by the Federal Government is not so nicely organized, or so easily found, however. I am a reasonably literate searcher and I have yet to be able to get the U.S. Code

online to give me electronically the title and subsections I want. Moreover, there are masses of government information that are not necessarily going to be relevantly identified for public use simply because they are posted electronically. What is the online trans-Federal index going to be? Who is going to maintain it? Does anyone really believe GILS is going to fulfill this purpose? At a meeting last fall, Bruce McConnell of OIRA made a sardonic comment apropos of finding information online: "Why spend one hour in the library when you can spend six hours online looking for the same information?" To which I can only say, "Indeed."

Yes, disintermediation is happening, and it is happening for the budgetary—and balance-of-power—reasons stated above. It is also occurring, however, because of what I am calling technological fascination—literally, being mesmerized by the technology.

The technology I am referring to is the World Wide Web, with its pretty graphics and its fun hot-links. Not only does a large segment of the general public that has access to it seem enthralled by it, but, more portentously, a large segment of the Federal Information Resource Management community appears to be similarly entranced. I use all of these verbs consciously. Admittedly, cruising the Web can be fun, and you can find all sorts of interesting connections. And Thomas is really fantastic and the Speaker is to be praised for pushing it through and giving some of the public access that is more equivalent to what people in DC have. But, when we consider that the vast majority of the public do not have computers, much less modems—and not to mention an Internet link (which does not guarantee you a Web link)—we are talking about a very small minority that will be able to get access to government (or any other) information this way. When they get access to it, also, they may only be able to print it in straight text form, not with headings, and formatting and tables and graphs, if they have a printer at all.

I am a member of the GILS subgroup—the only non-government person that comes to the Washington meetings. At one meeting, I was engaged in my usual harangue about ensuring that the public knows that you can get to GILS information without coming in over the Web.

GPO was talking about the relatively small proportion of the public access to GILS through GPO Access that is Web-generated and another agency (which shall remain nameless) said that they were only getting Web-generated hits. Well, GPO and I asked, is there any other way you have set up for the public to come in? The answer, of course, was "No." It is no big surprise, then, that the only ingress points from the public were Web. It had never occurred to this agency—which has a lot of IRM responsibilities for the Federal Government—to set it up any other way, or even additional way.

At a recent GILS meeting, we were discussing a public brochure and this issue of how the public can get access to the GILS databases and how to ensure that ways other than Web are made available came up again. One agency person noted that the only way she can get her bosses to understand electronic access is by showing them the Web—because they can do that, they can point and click.

So, we have IRM types fascinated by the glamour of the Web in conjunction with policy makers who can only see the usefulness of electronic access if they are shown the Web, and we end up with a dynamic that leads to government information being only made available electronically (for all the reasons outlined earlier) and only being made available for those with Web access. And, except for a few of us public-interest types grouching in the wind, nobody much seems to care. Which brings me to the fifth dynamic.

Lack of a Broad Constituency

While I know that the library community is very good at mobilizing librarians, some board members and a segment of the public on library-related issues, and the Internet community is incredible at mobilizing on issues of privacy and censorship, there is a thundering lack of interest on the topic of access to government-information-in-general and even less on issues of preventing information redlining, or the inability of sectors and segments of our society to get on the information superhighway. So, the poor, the disabled (many of whom cannot use the Web) and others are left out of the equations that go into building government information systems. One way of beginning to bring these perspectives and these needs into the discussion is through engagement with the community-based nonprofits that serve these communities.

Nonprofits are aware—albeit some only vaguely—that information, including, and in many cases especially, government information, is available electronically. As I mentioned, it is an absolute revelation to them that they can get to the Federal Register for free online. So, there is the germ of a constituency there, but it is a germ that has to be nurtured—with outreach, with some hand-holding, with possible provision of access.

Libraries have been very good at reaching out to the businesses in their communities; they have to become equally good at reaching out to and engaging with the nonprofits. I am not saying that this will yield fruit quickly (because I know from experience that it won't), but I am saying that unless it happens, unless Federal depository libraries and others ally themselves with the information have-nots and create a more broadly-based constituency for democratic access to government information, the trends identified previously are likely to carry us very far down an information superhighway that is effectively a toll road for most people. This more broadly-based constituency is also needed to counter what I have too often seen in the

pronouncements of some former Hill and executive branch personnel and in the actions of agency IRM folks.

Disdain for the "Infornates"

Because the information have-nots are not online to complain about what they don't have, it seems that they simply don't matter. If an agency only gives electronic public access over the Web, but all the Web users like it, then no question arises about anyone else. A recent editorial in *Government Computer News* lambasted the standard underlying the GILS and held that "since the Web is ubiquitous," the GILS standard should be done away with. While I carry no torch for the GILS, the underlying premise here is thoroughly out-of-touch with the reality of most folks I know: the Web is by no means ubiquitous, except among the cyberprivileged. And, even if it were, that does not mean that it should drive policy. At least when I studied logic, is did not equal ought.

So, we have budgetary concerns, balance-of-powers issues, disintermediation and technological fascination, lack of a broad constituency for information access concerns, and, for some, disdain structuring the direction of Federal information policy. While we can all lobby--while we still are allowed to--on the first four, the only ones that we can really begin to create change with are the last two. By working together--libraries, public interest groups and nonprofits concerned with community--we can begin to create a voice that will answer the disdain and demand access to information created and maintained by or for our Federal Government for all members of the public, regardless of their cyberstatus.

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